


STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 3

AMENDED REPORT ☐

APPLICATION FOR PERMIT TO DRILL						1. WELL NAME and NUMBER Thomas 3-4C4							
2. TYPE OF WORK DRILL NEW WELL <input checked="" type="checkbox"/> REENTER P&A WELL <input type="checkbox"/> DEEPEN WELL <input type="checkbox"/>						3. FIELD OR WILDCAT ALTAMONT							
4. TYPE OF WELL Oil Well Coalbed Methane Well: NO						5. UNIT or COMMUNITIZATION AGREEMENT NAME							
6. NAME OF OPERATOR EP ENERGY E&P COMPANY, L.P.						7. OPERATOR PHONE 713 997-5038							
8. ADDRESS OF OPERATOR 1001 Louisiana, Houston, TX, 77002						9. OPERATOR E-MAIL maria.gomez@epenergy.com							
10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE) Fee			11. MINERAL OWNERSHIP FEDERAL <input type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input type="checkbox"/> FEE <input checked="" type="checkbox"/>			12. SURFACE OWNERSHIP FEDERAL <input type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input type="checkbox"/> FEE <input checked="" type="checkbox"/>							
13. NAME OF SURFACE OWNER (if box 12 = 'fee') Blaine K Thomas, Marianne Thomas Moore, Mark K. Thomas, etc						14. SURFACE OWNER PHONE (if box 12 = 'fee') 8018078015							
15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee') 9306 South Julie Ann Way, West Jordan, UT 84088						16. SURFACE OWNER E-MAIL (if box 12 = 'fee')							
17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')			18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS YES <input type="checkbox"/> (Submit Commingling Application) NO <input checked="" type="checkbox"/>			19. SLANT VERTICAL <input checked="" type="checkbox"/> DIRECTIONAL <input type="checkbox"/> HORIZONTAL <input type="checkbox"/>							
20. LOCATION OF WELL		FOOTAGES		QTR-QTR		SECTION		TOWNSHIP		RANGE		MERIDIAN	
LOCATION AT SURFACE		1200 FSL 1000 FWL		SWSW		4		3.0 S		4.0 W		U	
Top of Uppermost Producing Zone		1200 FSL 1000 FWL		SWSW		4		3.0 S		4.0 W		U	
At Total Depth		1200 FSL 1000 FWL		SWSW		4		3.0 S		4.0 W		U	
21. COUNTY DUCESNE			22. DISTANCE TO NEAREST LEASE LINE (Feet) 1000			23. NUMBER OF ACRES IN DRILLING UNIT 640							
			25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed) 2400			26. PROPOSED DEPTH MD: 12700 TVD: 12700							
27. ELEVATION - GROUND LEVEL 6044			28. BOND NUMBER 400JU0708			29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE Duchesne City							
Hole, Casing, and Cement Information													
String	Hole Size	Casing Size	Length	Weight	Grade & Thread	Max Mud Wt.	Cement	Sacks	Yield	Weight			
Cond	17.5	13.375	0 - 600	54.5	J-55 ST&C	8.8	Class G	758	1.15	15.8			
Surf	12.25	9.625	0 - 2300	40.0	N-80 LT&C	9.4	Unknown	277	3.16	11.0			
							Unknown	191	1.33	14.3			
I1	8.75	7	0 - 9550	29.0	HCP-110 LT&C	10.5	Unknown	359	3.1	11.0			
							Unknown	91	1.91	12.5			
L1	6.125	5	9350 - 12700	18.0	P-110 ST-L	13.5	Unknown	198	1.47	14.2			
ATTACHMENTS													
VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES													
<input checked="" type="checkbox"/> WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER						<input checked="" type="checkbox"/> COMPLETE DRILLING PLAN							
<input checked="" type="checkbox"/> AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE)						<input type="checkbox"/> FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER							
<input type="checkbox"/> DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)						<input checked="" type="checkbox"/> TOPOGRAPHICAL MAP							
NAME Maria S. Gomez				TITLE Principal Regulatory Analyst				PHONE 713 997-5038					
SIGNATURE				DATE 11/13/2013				EMAIL maria.gomez@epenergy.com					
API NUMBER ASSIGNED 43013526660000				APPROVAL  Permit Manager									

RECEIVED: January 13, 2014

**Thomas 3-4C4
Sec. 4, T3S, R4W
DUCHESNE COUNTY, UT**

EP ENERGY E&P COMPANY, L.P.

DRILLING PROGRAM

1. Estimated Tops of Important Geologic Markers

<u>Formation</u>	<u>Depth</u>
Green River (GRRV)	4,761' TVD
Green River (GRTN1)	5,411' TVD
Mahogany Bench	6,381' TVD
L. Green River	7,761' TVD
Wasatch	9,591' TVD
T.D. (Permit)	12,700' TVD

2. Estimated Depths of Anticipated Water, Oil, Gas or Mineral Formations:

<u>Substance</u>	<u>Formation</u>	<u>Depth</u>
	Green River (GRRV)	4,761' MD / TVD
	Green River (GRTN1)	5,411' MD / TVD
	Mahogany Bench	6,381' MD / TVD
Oil	L. Green River	7,761' MD / TVD
Oil	Wasatch	9,591' MD / TVD

3. Pressure Control Equipment: (Schematic Attached)

A 4.5" by 20.0" rotating head on structural pipe from surface to 600' MD/TVD. A 4.5" by 13-3/8" Smith Rotating Head (Diverter) from 600' MD/TVD to 2,300' MD/TVD on Conductor. A 5M BOP stack, 5M kill lines and choke manifold used from 2,300' MD/TVD to 9,550' MD/TVD. A 10M BOE w/ rotating head, 5M annular, blind rams & mud cross from 9,550' MD/TVD to TD (12,700' MD/TVD).

The BOPE and related equipment will meet the requirements of the 5M and 10M system.

OPERATORS MINIMUM SPECIFICATIONS FOR BOPE:

The surface casing will be equipped with a flanged casing head of 5M psi working pressure. An 11" 5M x 11" 10M spool, 11" x 10M psi BOP and 5M psi annular will be nipped up on the surface casing and tested to 250 psi low test / 3,000 psi high test for 10 minutes each prior to drilling out. The surface casing will be tested to 1,000 psi. for 30 mins. Intermediate casing will be tested to the greater of 1,500 psi or 0.22 psi/ft. The choke manifold equipment, upper Kelly

cock and floor safety valves will be tested to 5M psi. The annular preventer will be tested to 250 psi low test / 4,000 psi high test. The 10M BOP will be installed with 3-½" pipe rams, blind rams, mud cross and rotating head from intermediate shoe to TD. The BOPE will be hydraulically operated.

In addition, the BOP equipment will be tested after running intermediate casing, after any repairs to the equipment and at least once every 30 days. Pipe and blind rams will be activated on each trip, annular preventer will be activated weekly and weekly BOP drills will be held with each crew.

Statement on Accumulator System and Location of Hydraulic Controls:

Precision Rig # 406 is expected to be used to drill the proposed well. Operations will commence after approval of this application. Manual and/or hydraulic controls will be in compliance with 5M and 10M psi systems.

Auxiliary Equipment:

- A) Pason Gas Monitoring 600' - TD
- B) Mud logger with gas monitor – 2,300' to TD (12,700' MD/TVD)
- C) Choke manifold with one manual and one hydraulic operated choke
- D) Full opening floor valve with drill pipe thread
- E) Upper and lower Kelly cock
- F) Shaker, de-sander and centrifuge

4. Proposed Casing & Cementing Program:

Please refer to the attached Wellbore Diagram.

All casing will meet or exceed the following design safety factors:

- Burst = 1.00
- Collapse = 1.125
- Tension = 1.2 (including 100k# overpull)

Cement design calculations for intermediate and production hole will be based on minimum 10% excess over gauge hole volumes. Actual volumes pumped will be a minimum of 10% excess over caliper volume to designed tops of cement for any section logged. A minimum of 50% excess over gauge volume will be pumped on surface casing.

5. Drilling Fluids Program:

Proposed Mud Program:

Interval	Type	Mud Weight
Surface	WBM	8.8 – 9.4
Intermediate	WBM	9.4 – 10.5
Production	WBM	10.5 – 13.5

Anticipated mud weights are based on actual offset well bottom-hole pressure data. Mud weights utilized may be somewhat higher to allow for trip margin and to provide hole stability for running logs and casing.

Visual mud monitoring equipment will be utilized.

6. **Evaluation Program:**

Logs:

Mud Log: 2,300' MD/TVD – TD (12,700' MD/TVD)

Open Hole Logs: Gamma Ray, Neutron-Density, Resistivity, Sonic, from surface casing shoe to TD.

7. **Abnormal Conditions:**

Maximum anticipated bottomhole pressure calculated at 12,700' TVD equals approximately 8,915 psi. This is calculated based on a 0.702 psi/ft gradient (13.5 ppg mud density at TD).

Maximum anticipated surface pressure equals approximately 6,121 psi (bottomhole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/ft).

Maximum anticipated surface pressure based on frac gradient at 7" casing shoe is 0.8 psi/ft at 9,550' TVD = 7,640 psi

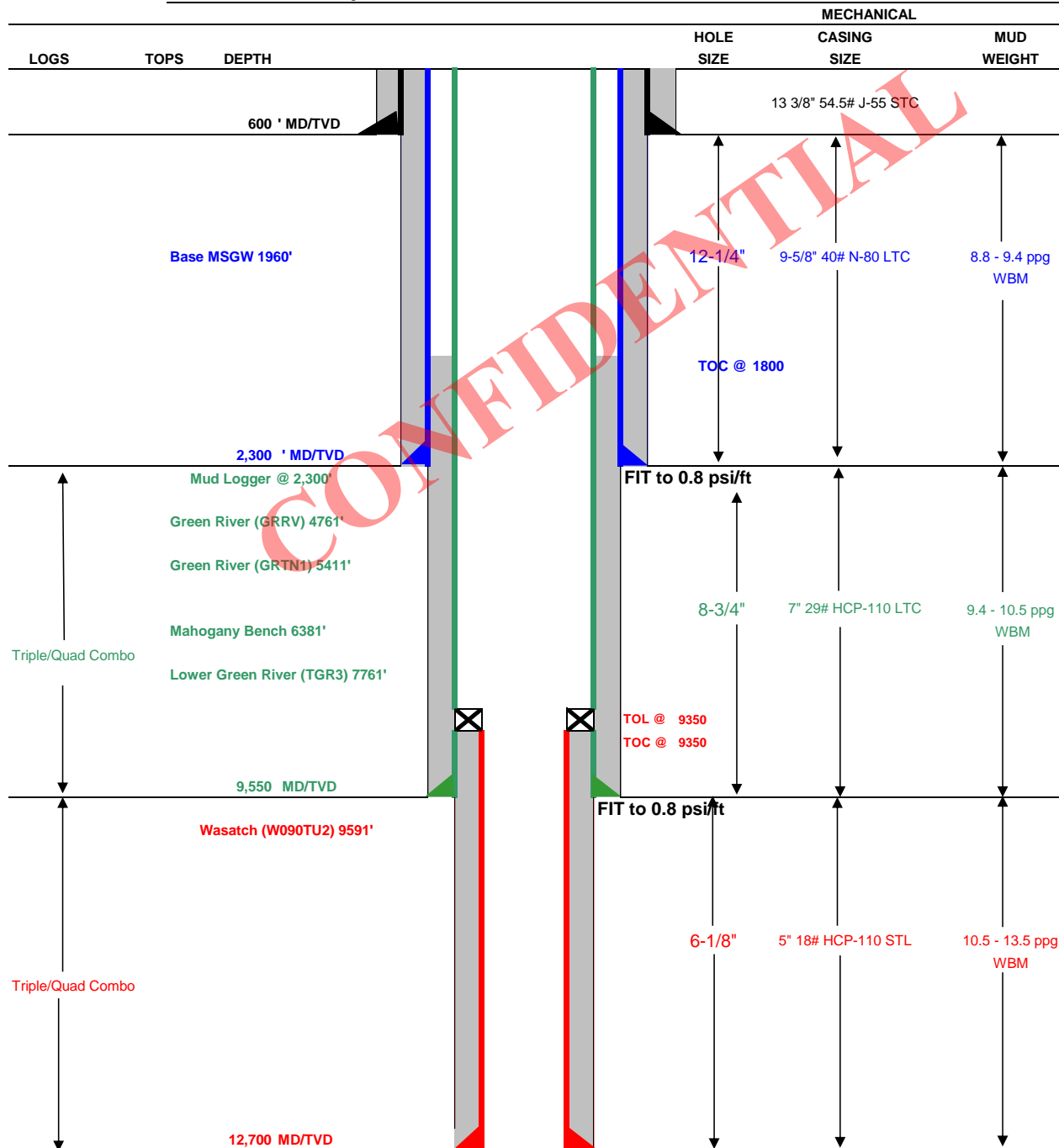
BOPE and casing design will be based on the lesser of the two MASPs which is 6,121 psi.

8. **OPERATOR REQUESTS THAT THE PROPOSED WELL BE PLACED ON CONFIDENTIAL STATUS.**



Drilling Schematic

Company Name: EP ENERGY	Date: November 13, 2013
Well Name: Thomas 3-4C4	TD: 12,700
Field, County, State: Altamont, Duchesne, Utah	AFE #: TBD
Surface Location: Sec 4 T3S R4W 1200' FSL 1000' FWL	BHL: Straight Hole
Objective Zone(s): Green River, Wasatch	Elevation: 6044.4
Rig: Precision 406	Spud (est.): TBD
BOPE Info: 4.5 x 13 3/8 rotating head from 600' to 2,300' 11 5M BOP stack and 5M kill lines and choke manifold used from 2,300' to 9,550' 11 10M BOE w/rotating head, 5M annular, 3.5 rams, blind rams & mud cross from 9,550' to TD	



DRILLING PROGRAM

CASING PROGRAM	SIZE	INTERVAL		WT.	GR.	CPLG.	BURST	COLLAPSE	TENSION
CONDUCTOR	13 3/8"	0	600	54.5	J-55	STC	2,740	1,130	514
SURFACE	9-5/8"	0	2300	40.00	N-80	LTC	5,750	3,090	737
INTERMEDIATE	7"	0	9550	29.00	HCP-110	LTC	11,220	9,750	797
PRODUCTION LINER	5'	9350	12700	18.00	HCP-110	STL	13,950	14,360	495

CEMENT PROGRAM		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
CONDUCTOR		600	Class G + 3% CACL2	758	100%	15.8 ppg	1.15
SURFACE	Lead	1,800	EXTENDACEM (TM) SYSTEM: 5 lbm/sk Silicalite Compacted + 0.25 lbm/sk Kwik Seal + 0.125 lbm/sk Poly-E-Flake + 2% Bentonite	277	75%	11.0 ppg	3.16
	Tail	500	HALCEM (TM) SYSTEM: 3 lbm/sk Silicalite Compacted + 1% Salt + 0.3% Econolite + 0.25 lbm/sk Poly-E-Flake + 0.25 lbm/sk Kwik Seal + 0.5% HR-5	191	50%	14.3 ppg	1.33
INTERMEDIATE	Lead	6,750	EXTENDACEM (TM) SYSTEM: 2% Cal Seal 60 + 5 lbm/sk Silicalite Compacted + 0.35% Versaset + 0.3% D-Air 5000 + 2.5% Econolite + 0.25 lbm/sk Poly-E-Flake + 1 lbm/sk Granulite TR 1/4	359	10%	11.0 ppg	3.10
	Tail	1,000	EXPANDACEM (TM) SYSTEM: 0.2% Econolite + 0.3% Versaset + 0.9% HR-5 + 0.3% Super CBL + 0.2% Halad(R)-322 + 0.125 lbm/sk Poly-E-Flake	91	10%	12.5 ppg	1.91
PRODUCTION LINER		3,350	EXTENDACEM (TM) SYSTEM: 0.3% Super CBL + 0.1% SA-1015 + 0.3% Halad(R)-413 + 0.5% SCR-100 + 0.125 lbm/sk Poly-E-Flake + 3 lbm/sk Silicalite Compacted + 20% SSA-1	198	25%	14.20	1.47

FLOAT EQUIPMENT & CENTRALIZERS	
CONDUCTOR	PDC drillable guide shoe, 1 joint, PDC drillable float collar. Thread lock all float equipment. Install bow spring centralizers on the bottom 3 joints of casing.
SURFACE	PDC drillable guide shoe, 1 joint casing, PDC drillable float collar & Stage collar. Thread lock all float equipment. Install bow spring centralizers on the bottom 3 joints of casing & every 3rd joint thereafter.
INTERMEDIATE	PDC drillable 10M,P-110 float shoe, 1 joint, PDC drillable 10M, P-110 float collar. Thread lock all float equipment. Maker joint at 7,700'.
LINER	Float shoe, 1 joint, float collar. Thread lock all FE. Maker joints every 1000'.

PROJECT ENGINEER(S): Brad MacAfee 713-997-6383

MANAGER: Tommy Gaydos

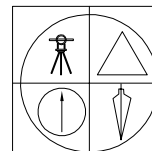
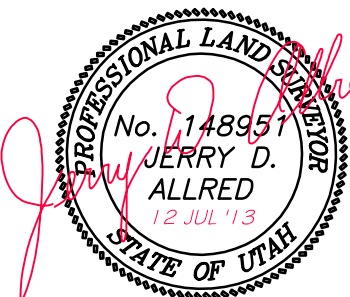
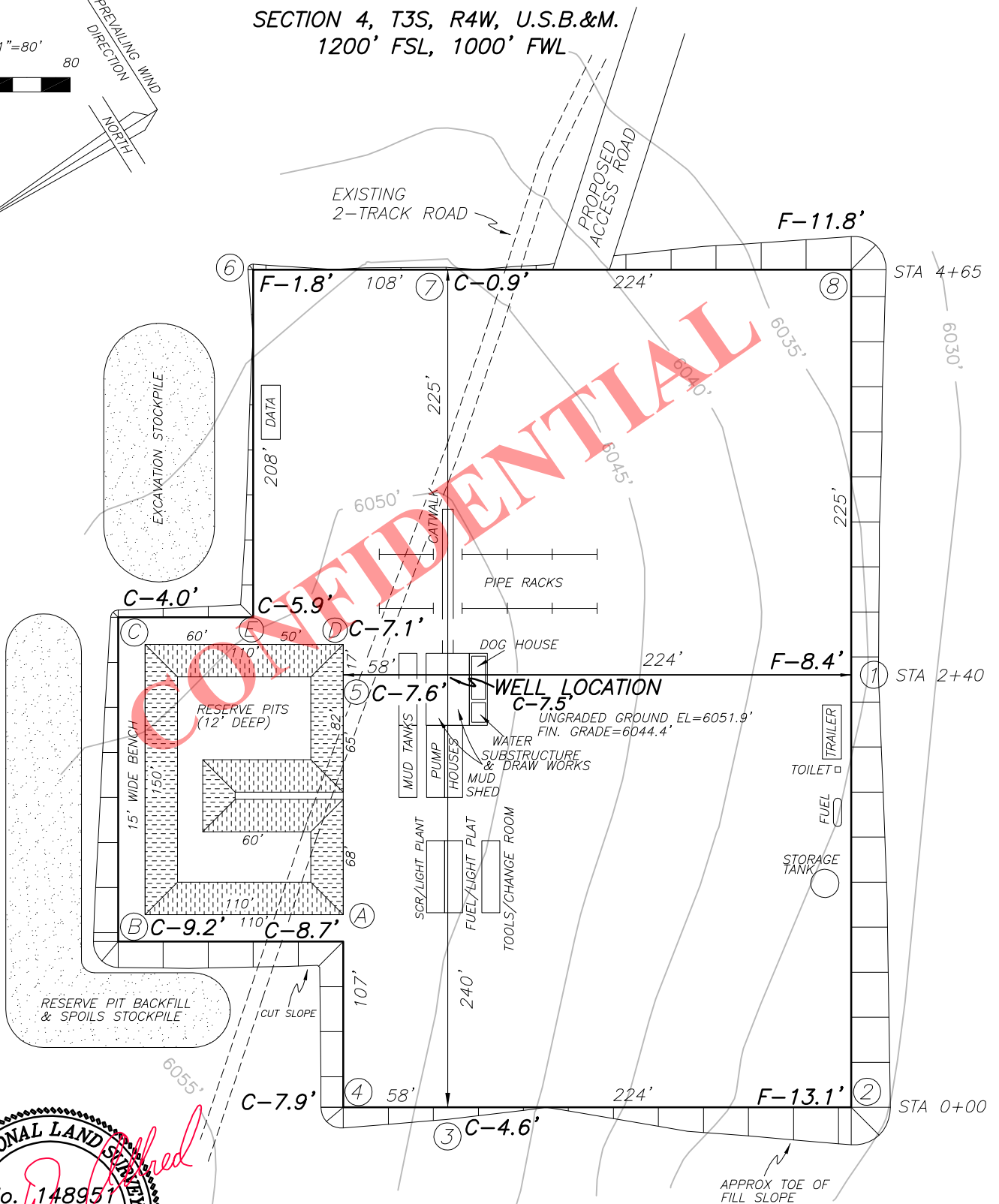
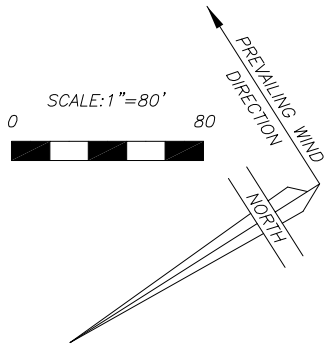
EP ENERGY E&P COMPANY, L.P.
THOMAS 3-4C4
SECTION 4, T3S, R4W, U.S.B.&M.

PROCEED NORTH ON PAVED STATE HIGHWAY 87 FROM THE INTERSECTION OF HIGHWAY 87 WITH U.S. HIGHWAY 40 IN DUCHESNE, UTAH APPROXIMATELY 5.98 MILES TO AN INTERSECTION;

TURN RIGHT AND TRAVEL SOUTHEASTERLY AND EASTERLY 2.26 MILES ON A GRAVEL COUNTY ROAD TO THE BEGINNING OF THE PROPOSED ACCESS ROAD;

TURN LEFT AND FOLLOW ROAD FLAGS NORTHERLY 0.08 MILES TO THE PROPOSED LOCATION;

TOTAL DISTANCE FROM DUCHESNE, UTAH TO THE PROPOSED WELL LOCATION IS APPROXIMATELY 8.24 MILES.

EP ENERGY E & P COMPANY, L.P.**FIGURE #1****LOCATION LAYOUT FOR****THOMAS 3-4C4****SECTION 4, T3S, R4W, U.S.B.&M.****1200' FSL, 1000' FWL**

JERRY D. ALLRED & ASSOCIATES
SURVEYING CONSULTANTS

1235 NORTH 700 EAST--P.O. BOX 975
DUCHESNE, UTAH 84021
(435) 738-5352

12 JUL 2013

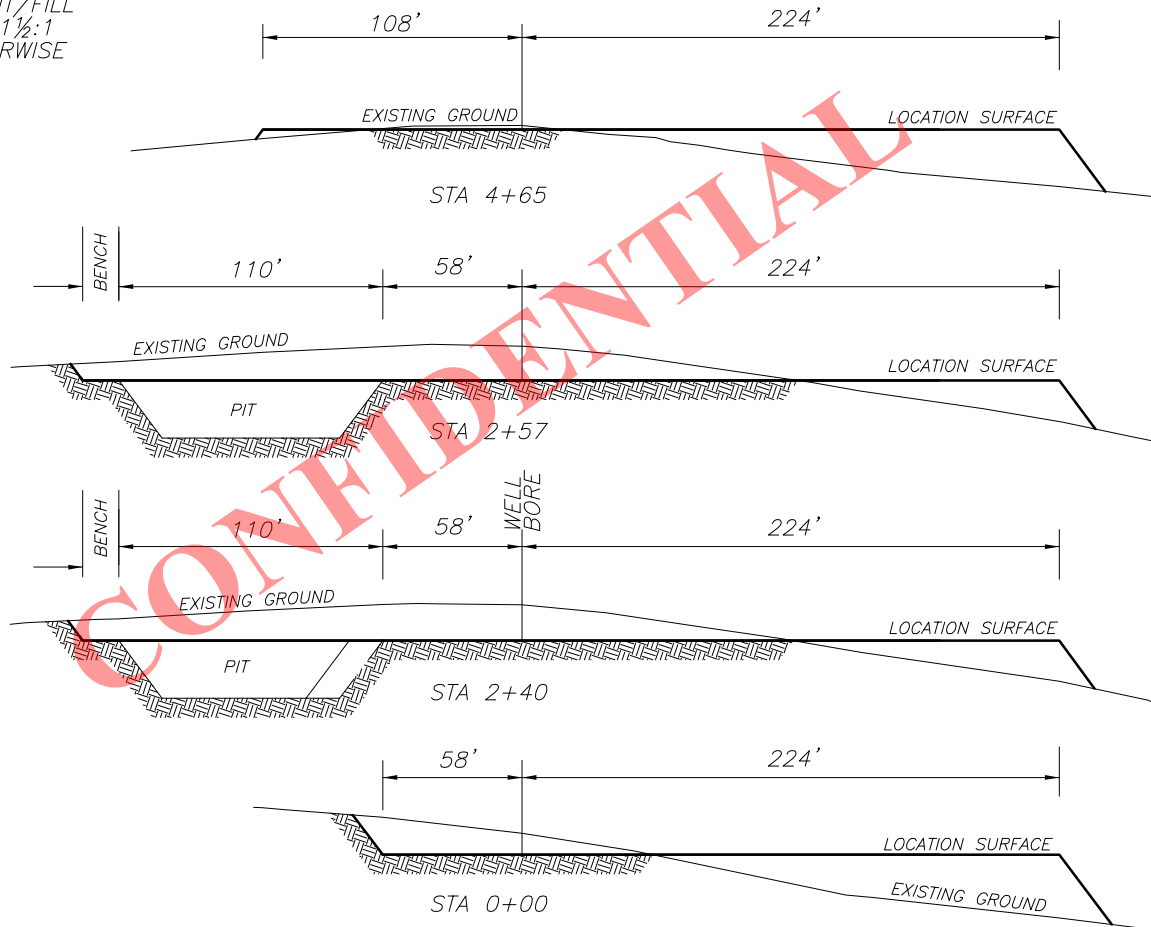
01-128-414

RECEIVED: November 13, 2013

EP ENERGY E & P COMPANY, L.P.**FIGURE #2****LOCATION LAYOUT FOR****THOMAS 3-4C4****SECTION 4, T3S, R4W, U.S.B.&M.****1200' FSL, 1000' FWL**

X-SECTION
SCALE
1"=40'
1"=80'

NOTE: ALL CUT/FILL
SLOPES ARE 1½:1
UNLESS OTHERWISE
NOTED

**APPROXIMATE YARDAGES**

TOTAL CUT (INCLUDING PIT) = 25,391 CU. YDS.

PIT CUT = 4955 CU. YDS.

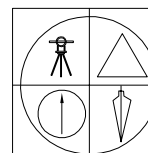
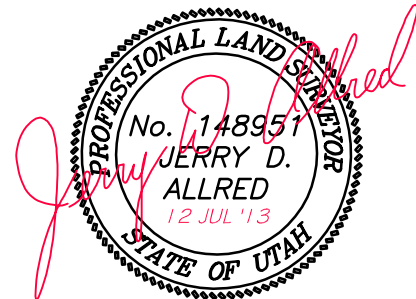
TOPSOIL STRIPPING: (6") = 3390 CU. YDS.

REMAINING LOCATION CUT = 17,046 CU. YDS

TOTAL FILL = 17,046 CU. YDS.

LOCATION SURFACE GRAVEL=1653 CU. YDS. (4" DEEP)

ACCESS ROAD GRAVEL=100 CU. YDS.



JERRY D. ALLRED & ASSOCIATES
SURVEYING CONSULTANTS

1235 NORTH 700 EAST--P.O. BOX 975
DUCHESNE, UTAH 84021
(435) 738-5352

12 JUL 2013

01-128-414

RECEIVED: November 13, 2013

EP ENERGY E & P COMPANY, L.P.**FIGURE #3**

LOCATION LAYOUT FOR
 THOMAS 3-4C4
 SECTION 4, T3S, R4W, U.S.B.&M.
 1200' FSL, 1000' FWL

SCALE: 1"=80'

80



WELL PAD AREA
 BERMED AND USED
 FOR PRODUCTION

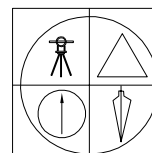
ENTIRE WELL PAD
 RECONTOURED BACK
 TO AVERAGE SLOPE
 FOR FINAL SURFACE
 RECLAMATION AFTER
 PRODUCTION

PIT AREA REGRADED
 BACK TO SLOPE FOR
 INTERIM RECLAMATION

CONFIDENTIAL

12 JUL 2013

01-128-414



JERRY D. ALLRED & ASSOCIATES
 SURVEYING CONSULTANTS

1235 NORTH 700 EAST--P.O. BOX 975
 DUCHESNE, UTAH 84021
 (435) 738-5352

RECEIVED: November 13, 2013

EP ENERGY E & P CO, L.P.
SURFACE USE AREA
THOMAS 3-4C4
6.21 ACRES

LINE	BEARING	DISTANCE
L1	S 57°33'21" E	515.00'
L2	S 32°26'39" W	525.00'
L3	N 57°33'21" W	515.00'
L4	N 32°26'39" E	525.00'
L5	S 39°48'50" E	276.77'
L6	S 39°48'50" E	52.44'
L7	S 00°56'00" E	43.46'

Commencing at the West Quarter Corner of Section 4, Township 3 South, Range 4 West of the Uintah, Special Base and Meridian;
Thence South 41°52'18" East 1399.05 feet to the TRUE POINT OF BEGINNING;
Thence South 57°33'21" East 515.00 feet;
Thence South 32°26'39" West 525.00 feet;
Thence South 57°33'21" West 515.00 feet;
Thence North 32°26'39" East 525.00 feet to the TRUE POINT OF BEGINNING, containing 6.21 acres.

A 66 feet wide access road, power line, and pipeline corridor right-of-way over portions of Section 4, Township 3 South, Range 4 West of the Uintah Special Base and Meridian, the centerline of said right-of-way being further described as follows:

Commencing at the Southwest Quarter of Section 4, Township 3 South, Range 4 West of the Uintah Special Base and Meridian;

Thence North 49°08'25" East 1532.57 feet to the TRUE POINT OF BEGINNING;

Thence South 39°48'50" East 276.77 feet;

Thence South 39°48'50" East 52.44 feet;

Thence South 00°56'00" East 43.46 feet to the North line of an existing road. Said right-of-way being 372.67 feet in length with the side lines being shortened or elongated to intersect said use area boundary and existing road lines.

This is to certify that this plat was prepared from the field notes and electronic data collector files of an actual survey made by me, or under my personal supervision, of the use area and access road, power line, and pipeline corridor right-of-way shown hereon, and that the monuments indicated were found or set during said survey, and that this plat accurately represents said survey to the best of my knowledge.

JERRY D. ALLRED, REGISTERED LAND SURVEYOR,
CERTIFICATE NO. 148951 (UTAH)

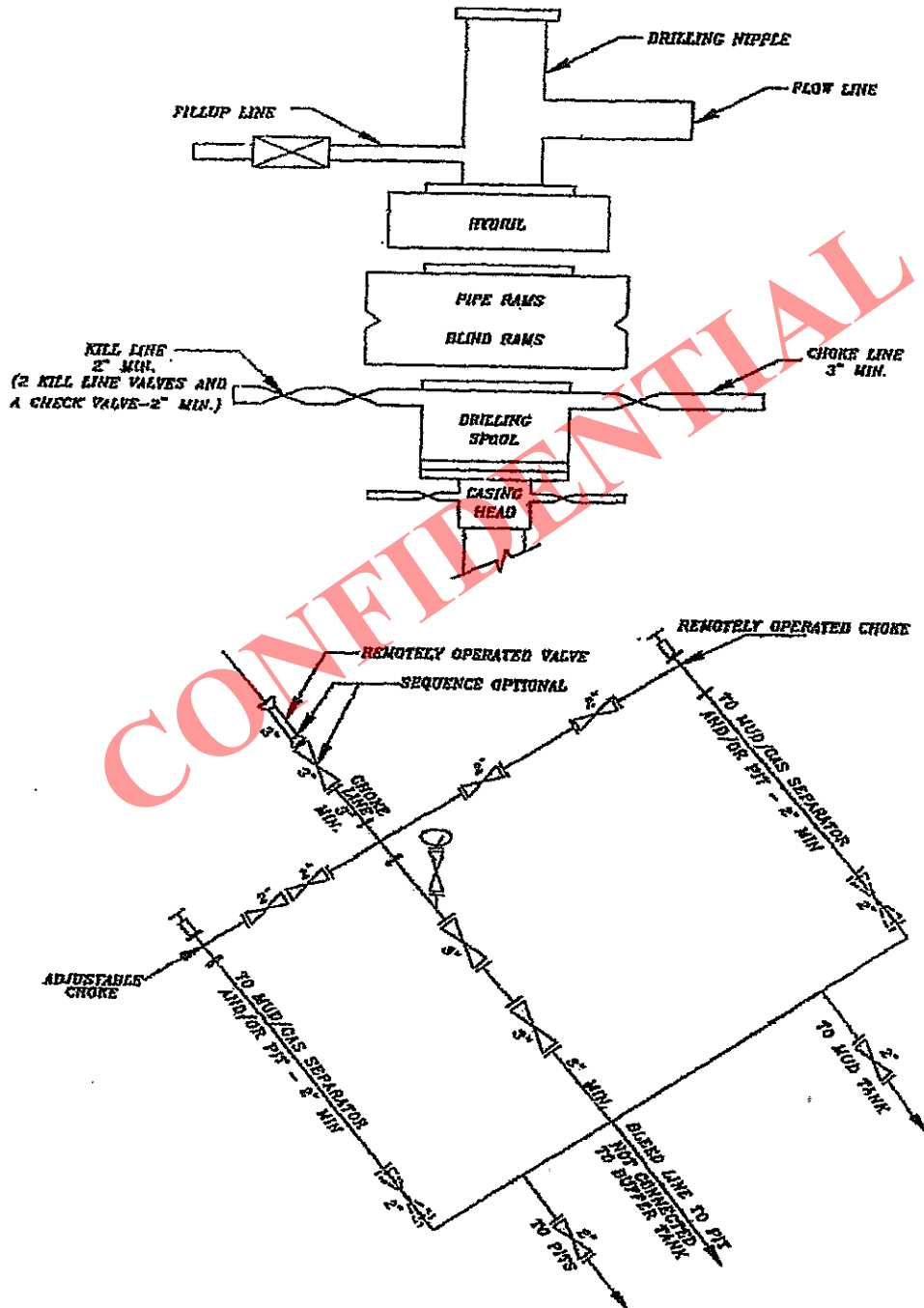


THE BASIS OF BEARINGS IS GEODETIC NORTH DERIVED FROM G.P.S. OBSERVATIONS AT A SECTION CORNER LOCATED AT LAT. 40°15'22.90258"N, AND LONG. 110°23'21.19760"W USING THE UTAH STATE G.P.S. VIRTUAL REFERENCE STATION CONTROL NETWORK MAINTAINED AND OPERATED BY THE AUTOMATED GEOGRAPHIC REFERENCE CENTER

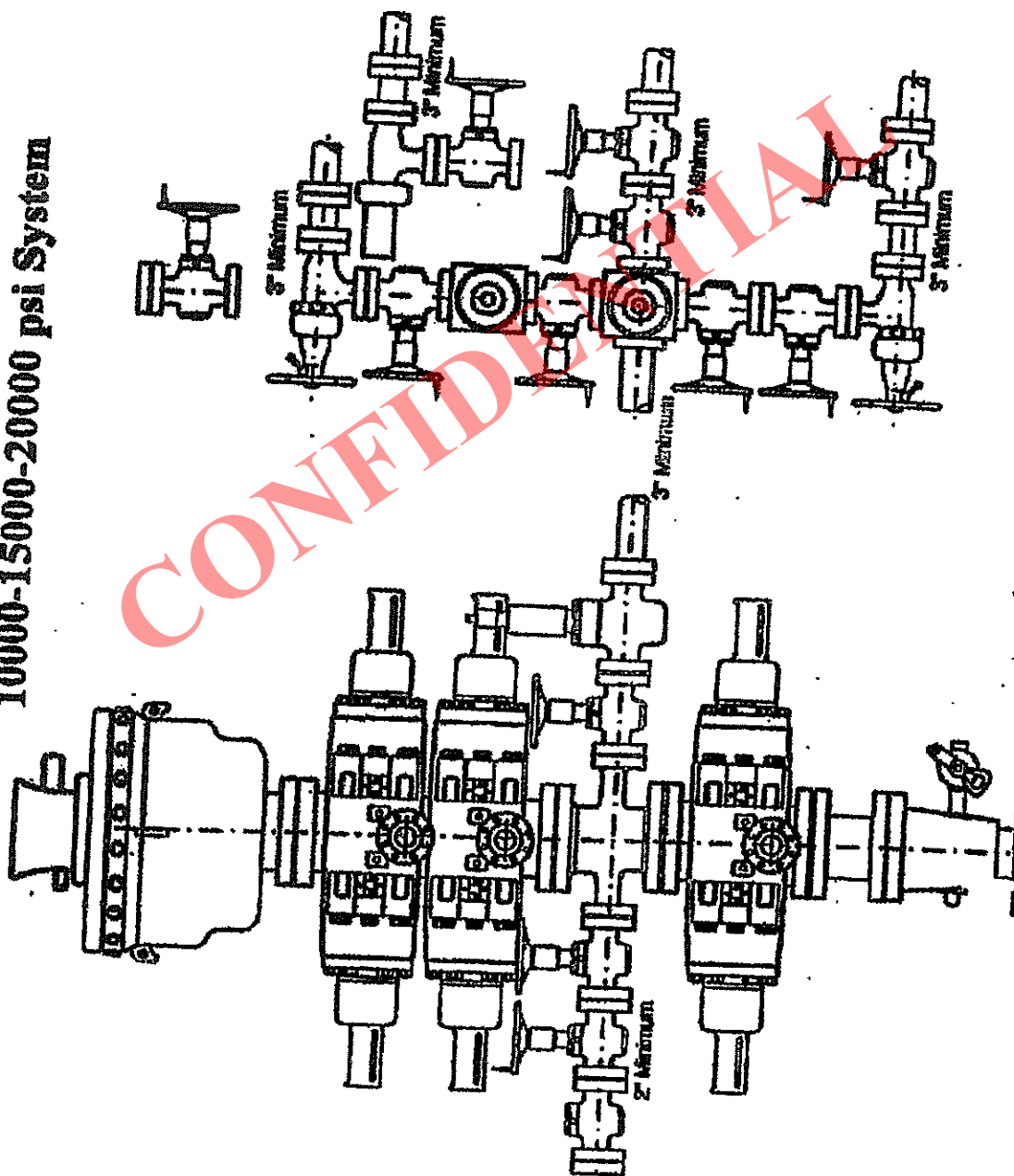
12 JUL 2013 01-128-414

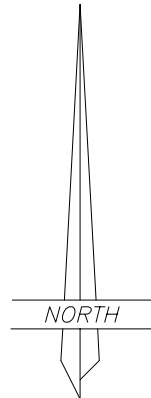
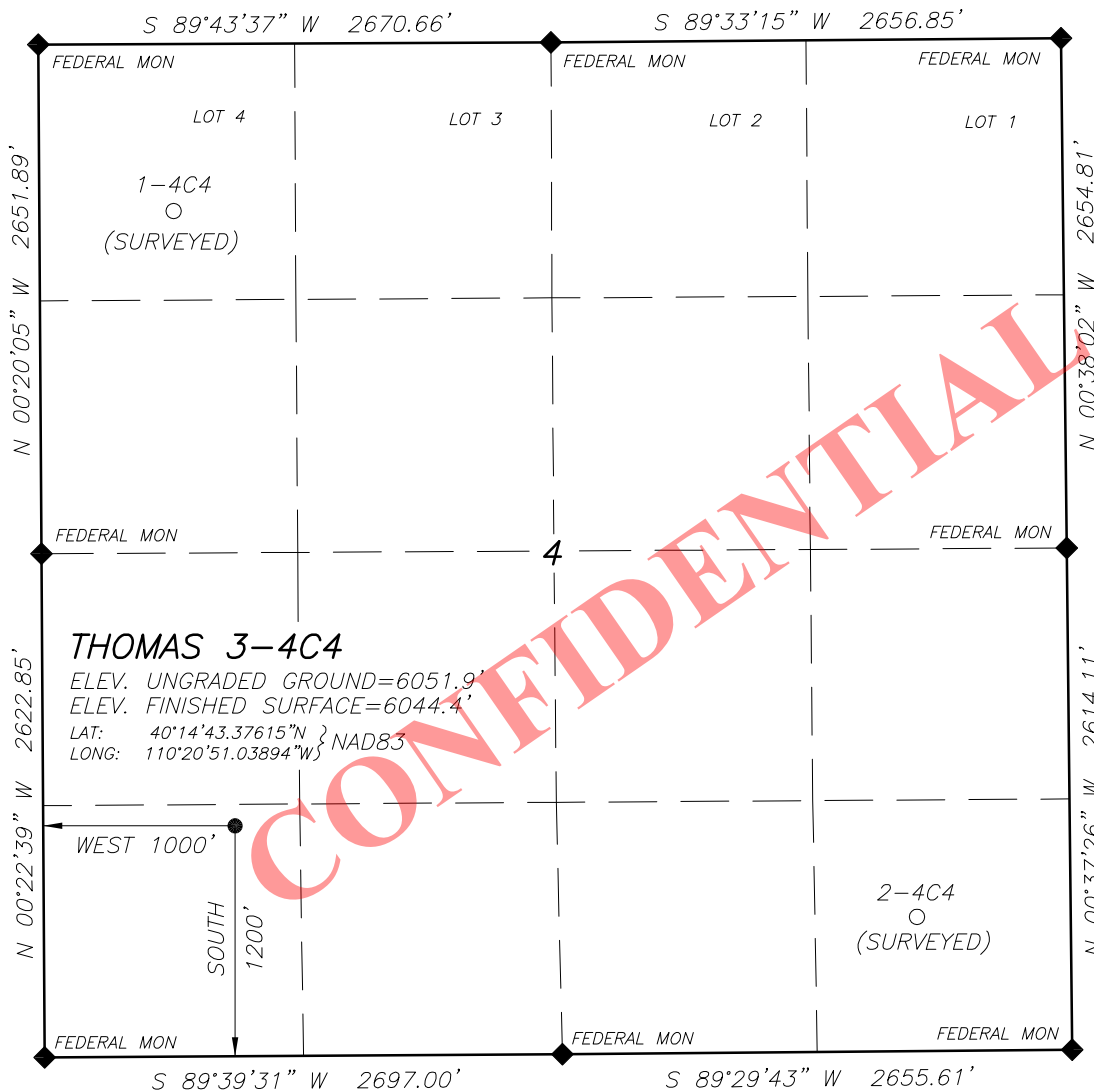
FERRY D. ALLRED AND ASSOCIATES
SURVEYING CONSULTANTS
1235 NORTH 700 EAST--P.O. BOX 975
DUCHESENE, UTAH 84021
(435) 738-5352

5M BOP STACK and CHOKE MANIFOLD SYSTEM



10000-15000-20000 psi System



EP ENERGY E & P COMPANY, L.P.**WELL LOCATION****THOMAS 3-4C4**LOCATED IN THE SW¼ OF THE SW¼ OF
SECTION 4, T3S, R4W, U.S.B.&M.
DUCHESNE COUNTY, UTAH

SCALE: 1" = 1000'

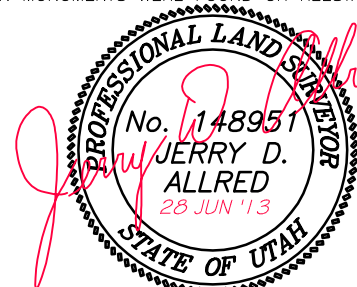


NOTE:
NAD27 VALUES FOR
WELL POSITION:
LAT: 40.24542576° N
LONG: 110.34679991° W

SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT THIS PLAT WAS PREPARED FROM THE FIELD NOTES AND ELECTRONIC DATA COLLECTOR FILES OF AN ACTUAL SURVEY PERFORMED BY ME, OR UNDER MY PERSONAL SUPERVISION, DURING WHICH THE SHOWN MONUMENTS WERE FOUND OR REESTABLISHED.

JERRY D. ALLRED, REGISTERED LAND SURVEYOR,
CERTIFICATE NO. 148951 (UTAH)

**LEGEND AND NOTES**

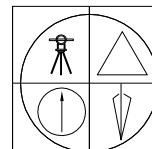
◆ CORNER MONUMENTS FOUND AND USED BY THIS SURVEY

THE GENERAL LAND OFFICE (G.L.O.) PLAT WAS USED FOR REFERENCE AND CALCULATIONS AS WAS THE U.S.G.S. MAP

THIS SURVEY WAS PERFORMED USING GLOBAL POSITIONING SYSTEM PROCEDURES AND EQUIPMENT

THE BASIS OF BEARINGS IS GEODETIC NORTH DERIVED FROM G.P.S. OBSERVATIONS AT A SECTION CORNER LOCATED AT LAT. 40°15'22.90258"N AND LONG. 110°23'21.19760"W USING THE UTAH STATE G.P.S. VIRTUAL REFERENCE STATION CONTROL NETWORK MAINTAINED AND OPERATED BY THE AUTOMATED GEOGRAPHIC REFERENCE CENTER

BASIS OF ELEVATIONS: NAVD 88 DATUM USING THE UTAH REFERENCE NETWORK CONTROL SYSTEM

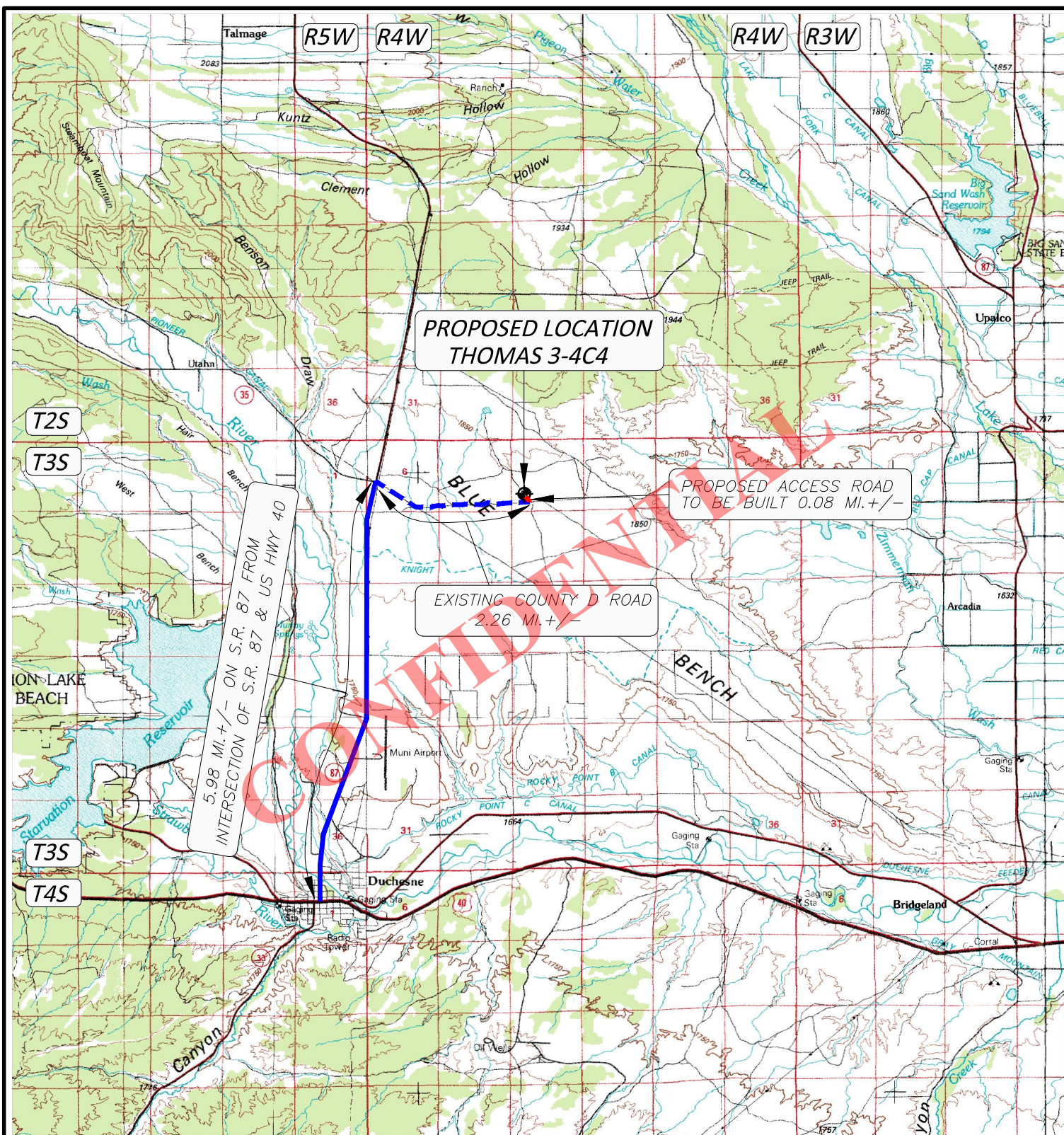


JERRY D. ALLRED & ASSOCIATES
SURVEYING CONSULTANTS

1235 NORTH 700 EAST--P.O. BOX 975
DUCHESNE, UTAH 84021
(435) 738-5352

28 JUN 2013 01-128-413

RECEIVED: November 13, 2013



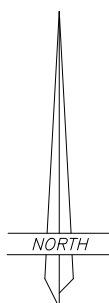
LEGEND:

◆ PROPOSED WELL LOCATION

01-128-414

JERRY D. ALLRED & ASSOCIATES
SURVEYING CONSULTANTS

1235 NORTH 700 EAST--P.O. BOX 975
DUCHESTER, UTAH 84021
(435) 738-5352



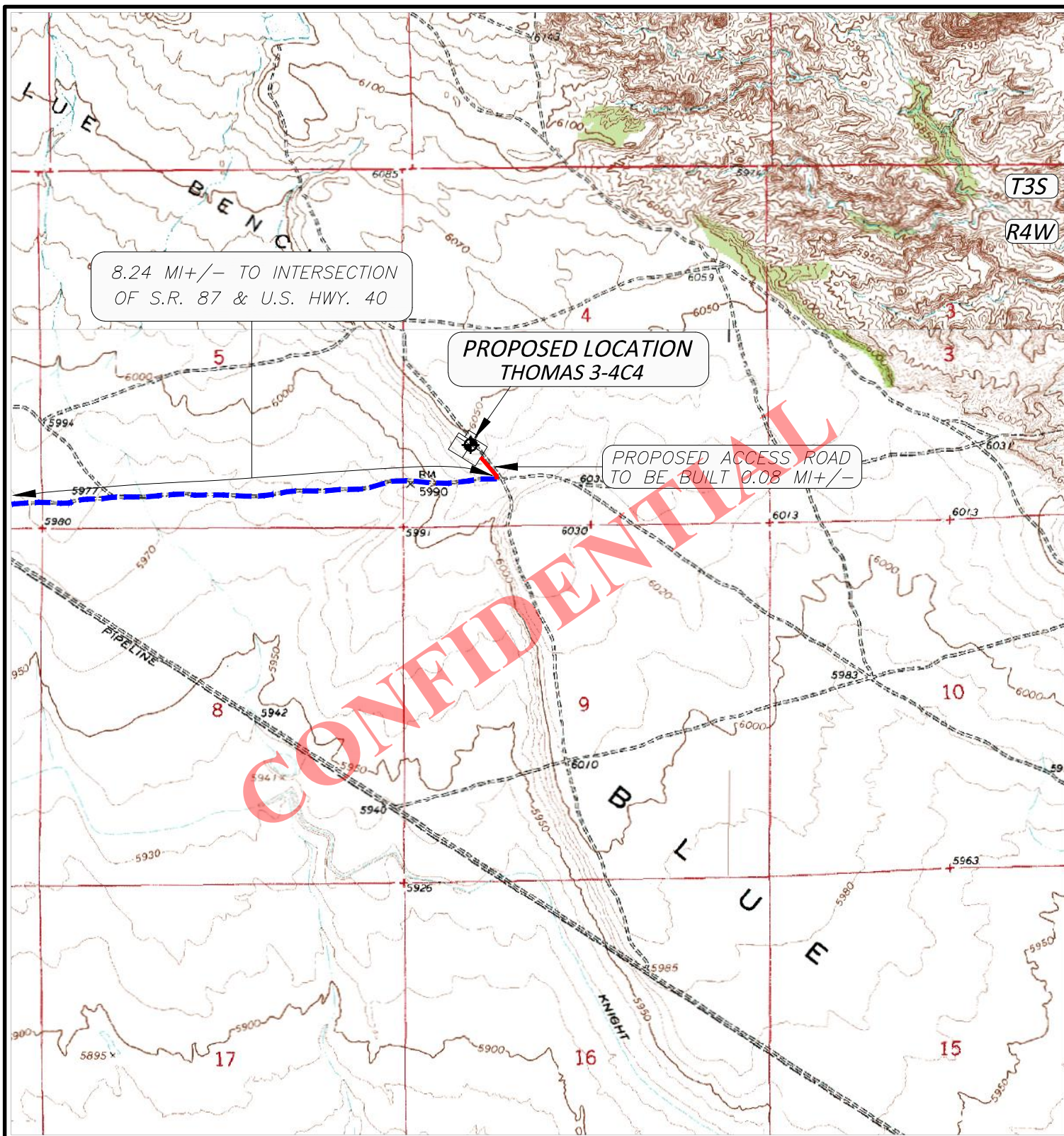
EP ENERGY E & P COMPANY, L.P.





THOMAS 3-4C4
SECTION 4, T3S, R4W, U.S.B.&M.
1200' FSL 1000' FWL

TOPOGRAPHIC MAP "A"

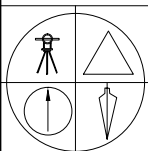
SCALE: 1"=10,000'
12 JUL 2013

RECEIVED: November 13, 2013

**LEGEND:**

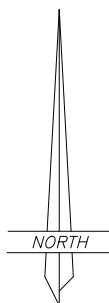
-  PROPOSED WELL LOCATION
-  PROPOSED ACCESS ROAD
-  EXISTING GRAVEL ROAD
-  EXISTING DIRT ROAD

01-128-414



JERRY D. ALLRED & ASSOCIATES
SURVEYING CONSULTANTS

1235 NORTH 700 EAST--P.O. BOX 975
DUCHESE, UTAH 84021
(435) 738-5352

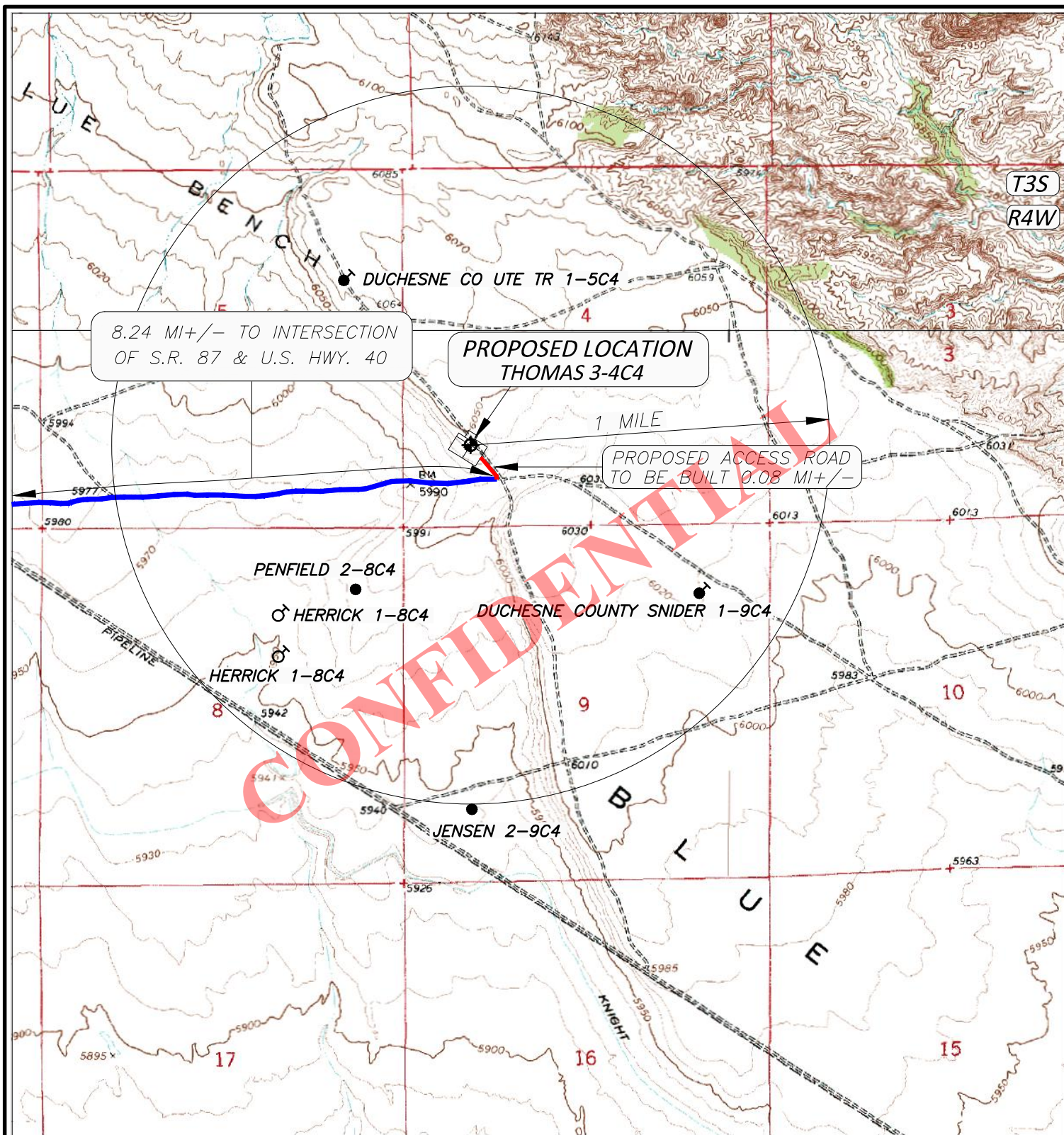
**EP ENERGY E & P COMPANY, L.P.**

THOMAS 3-4C4
SECTION 4, T3S, R4W, U.S.B.&M.
1200' FSL 1000' FWL

TOPOGRAPHIC MAP "B"

SCALE: 1"=2000'
12 JUL 2013

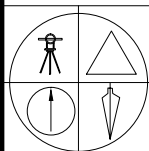
RECEIVED: November 13, 2013

**LEGEND:**

◆ PROPOSED WELL LOCATION

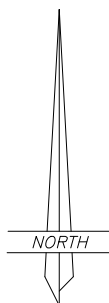
● ○ + ◆ ◆ ♂

01-128-414



JERRY D. ALLRED & ASSOCIATES
SURVEYING CONSULTANTS

1235 NORTH 700 EAST--P.O. BOX 975
DUCHESE, UTAH 84021
(435) 738-5352



EP ENERGY E & P COMPANY, L.P.

THOMAS 3-4C4
SECTION 4, T3S, R4W, U.S.B.&M.

1200' FSL 1000' FWL

TOPOGRAPHIC MAP "C"

SCALE: 1"=2000'
21 JUL 2013

RECEIVED: November 13, 2013

AFFIDAVIT OF DAMAGE SETTLEMENT AND RELEASE AND RIGHT-OF-WAY AGREEMENT

This **Affidavit of Damage Settlement and Release and Right-of-Way Agreement** ("Affidavit"), dated effective this 7th day of November, 2013 ("Effective Date"), is being made by **EP Energy E&P Company, L.P.** ("EP Energy") (formerly known as El Paso E&P Company, L.P.), a Delaware limited partnership, whose address is 1001 Louisiana Street, Houston, Texas 77002, and herein represented by **Joshua Yokum** ("Affiant"), being first duly sworn upon oath, who hereby deposes and states as follows:

1. Affiant is over eighteen (18) years of age and is currently employed by EP Energy as a Landman.

2. EP Energy is the operator of the proposed Thomas 3-4C4 (the "Well") which is to be situated within the Southwest Quarter (SW/4) of Section 4, Township 3 South, Range 4 West, U.S.M., Duchesne County, Utah (the "Drillsite Location"). The surface owners of the Drillsite Location are Blaine K. Thomas, Marianne Thomas Moore, Mark K. Thomas, Stanton B. Thomas and Stephen E. Thomas, Tenants in Common (collectively the "Surface Owner"), whose mailing address is 9306 South Julie Ann Way, West Jordan, Utah 84088, and whose telephone number is (801)-807-8015.

3. EP Energy and the Surface Owner have entered into and executed that certain *Damage Settlement and Release*, dated effective November 06, 2013, to cover any and all injuries or damages of every character and description sustained by the Surface Owner or Surface Owner's property as a result of EP Energy's operations including, but not limited to, construction of the Drillsite Location and drilling the Well.

4. EP Energy and the Surface Owner have also entered and executed that certain *Right-of-Way Agreement*, dated effective October 28, 2013, for an access road, pipeline and power line corridor across portions of the Southwest Quarter (SW/4) of Section 4, Township 3 South, Range 4 West, U.S.M., Duchesne County, Utah.

FURTHER AFFIANT SAYETH NOT.

AFFIANT:

By: _____

Name: Joshua Yokum

Title: Landman

STATE OF TEXAS §

§

COUNTY OF HARRIS §

Sworn to and subscribed before me on this 7th day of November, 2013, by **Joshua Yokum** as Landman for **EP Energy E&P Company, L.P.**, a Delaware limited partnership.

Ginger M. Cearley
Notary Public in and for the State of Texas



EP Energy E&P Company, L.P.

Related Surface Information

1. **Current Surface Use:**

- Livestock Grazing and Oil and Gas Production.

2. **Proposed Surface Disturbance:**

- The road will be crown and ditch. Water wings will be constructed on the access road as needed.
- The topsoil will be windrowed and re-spread in the borrow area.
- New road to be constructed will be approximately .08 miles in length and 66 feet wide.
- All equipment and vehicles will be confined to the access road, pad and area specified in the APD.

3. **Location Of Existing Wells:**

- Existing oil, gas wells within one (1) mile radius of proposed well are provided in EXHIBIT C.

4. **Location And Type Of Drilling Water Supply:**

- Drilling water: Duchesne City Water

5. **Existing/Proposed Facilities For Productive Well:**

- There are no existing facilities that will be utilized for this well.
- A pipeline corridor .08 miles will parallel the proposed access road. The corridor will contain one 4 inch gas line and one 2 inch gas line and one 2 inch Salt Water disposal line. Rehabilitation of unneeded, previously disturbed areas will consist of backfilling and contouring the reserve pit area; backsloping and contouring all cut and fill slopes. These areas will be reseeded. Refer to plans for reclamation of surface for details.
- Upgrade and maintain access roads and drainage control structures (e.g., culverts, drainage dips, ditching, etc.) as necessary to prevent soil erosion and accommodate safe, year-round traffic.

6. **Construction Materials:**

- Native soil from road and location will be used for construction materials along with gravel and/or scoria road base material. In the event that conditions should necessitate graveling of all or part of the access road and location, surfacing materials will be purchased from commercial suppliers in the marketing area.

7. **Methods For Handling Waste Disposal:**

- The reserve pit will be designed to prevent the collection of surface runoff and will be constructed with a minimum of ½ the total depth below the original ground surface on the lowest point with the pit. The pit will be lined with a 20-mil polyethylene to prevent leakage of fluids. The liner will be rolled into place and secured at the ends, i.e. buried on top of the pit berms. Prior to use, the reserve pit will be fenced on three sides; the fourth side will be fenced at the time the rig is removed. Drilling fluids, cuttings and produced water will be contained in the reserve pit (trash will be placed in the trash cage). Fluids in the reserve pit will be allowed to evaporate prior to pit burial.
- Garbage and other trash will be contained in the portable trash cage and hauled off the location to an authorized disposal site. Any trash on the pad will be cleaned up prior to the rig moving off location and hauled to an authorized disposal site.
- Sewage will be handled in Portable Toilets.
- Produced water will be placed in the reserve pit for a period not to exceed ninety days after initial production. Any hydrocarbons produced during completion work will be contained in test tanks and removed from the location at a later date.
- Water from the reserve pit may be used for drilling of additional wells. The water will be trucked along access roads as approved in pertinent APD's

8. **Ancillary Facilities:**

- There will be no ancillary facilities associated with this project.

9. **Surface Reclamation Plans:**

Backfilling of the pits will be done when dry. In the event of a dry hole, the location will be re-contoured, the topsoil will be distributed evenly over the entire location, and the seedbed prepared.

- Seed will be planted after September 15th, and prior to ground frost, or seed will be planted after the frost has left and before May 15th. Slopes to steep for machinery will be hand broadcast and raked with twice the specified amount of seed.
 1. The construction program and design are on the attached cut, fill and cross sectional diagrams.
 2. Prior to construction, all topsoil will be removed from the entire site and stockpiled. Topsoil for this site is the first 6 inches of soil materials.
 3. After the location has been reshaped and after redistributing the topsoil, the operator will rip and scarify the drilling platform and access road on the contour, to a depth of at least 12 inches.
- Rehabilitation will begin upon the completion of the drilling. Complete rehabilitation will depend on weather conditions and the amount of time required to dry the reserve pit.
 1. All rehabilitation work including seeding will be completed as soon as weather and the reserve pit conditions are appropriate.
 2. Landowner will be contacted for rehabilitation requirements.

10. **Surface Ownership:**

Blaine K. Thomas, Marianne Thomas Moore, Mark K. Thomas, Stanton B. Thomas and Stephen E. Thomas
9306 South Julie Ann Way
West Jordan, Utah 84088
801-807-8015

Other Information:

- The surface soil consists of clay, and silt.
- Flora – vegetation consists of the following: Sagebrush, Juniper and prairie grasses.
- Fauna – antelope, deer, coyotes, raptors, small mammals, and domestic grazing animals.
- Current surface uses – Livestock grazing and mineral exploration and production.

• **Operator and Contact Persons:**

Construction and Reclamation:

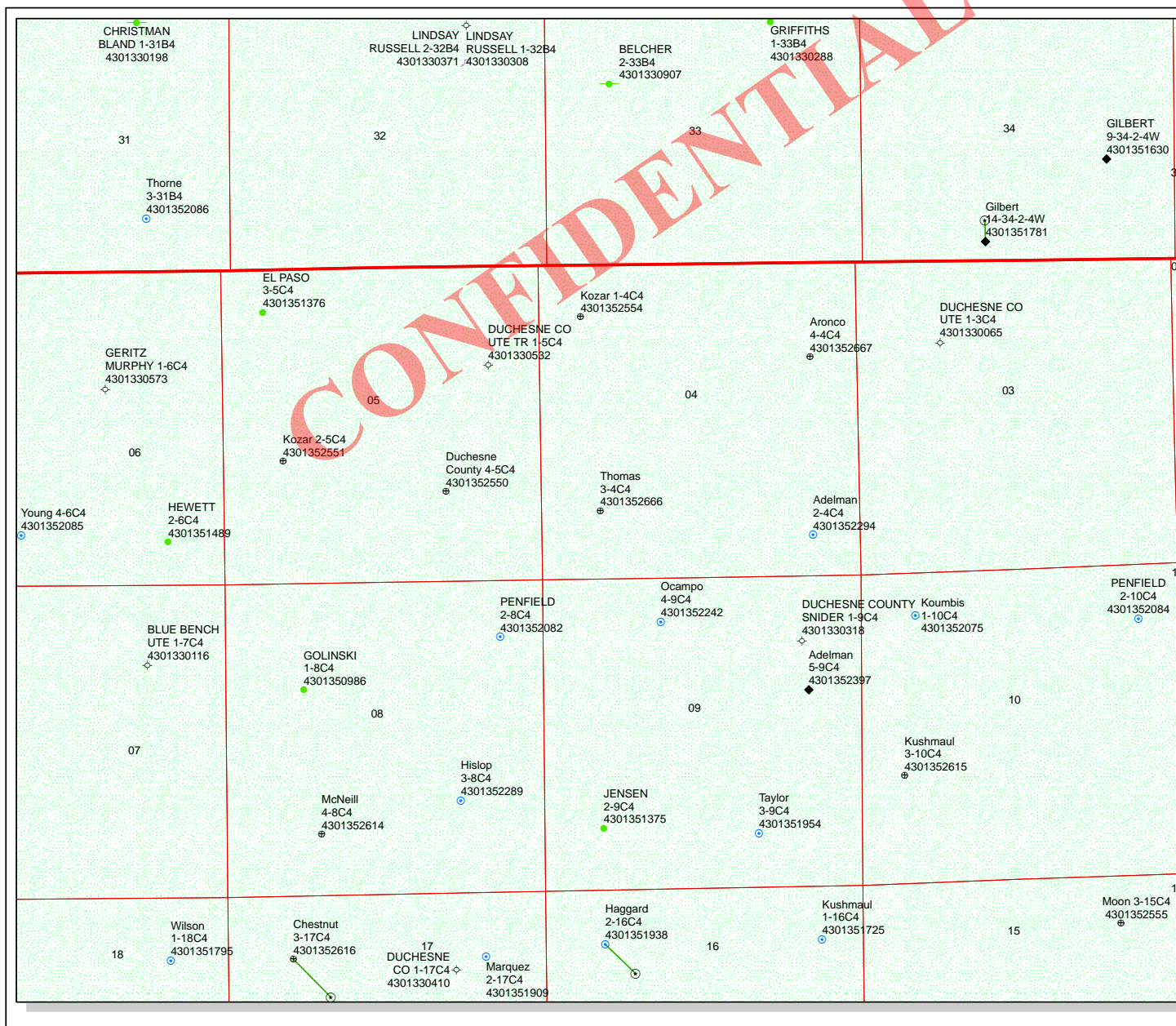
EP Energy E&P Company, L.P.
Wayne Garner
PO Box 410
Altamont, Utah 84001
435-454-3394 – Office
435-823-1490 – Cell

Regarding This APD

EP Energy E&P Company, L.P.
Maria S. Gomez
1001 Louisiana, Rm 2730D
Houston, Texas 77002
713-997-5038 – Office

Drilling

EP Energy E&P Company, L.P.
Brad MacAfee – Drilling Engineer
1001 Louisiana, Rm 2660D
Houston, Texas 77002
713-997-6383 – office
281-813-0902 – Cell



API Number: 4301352666

Well Name: Thomas 3-4C4

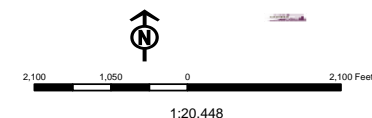
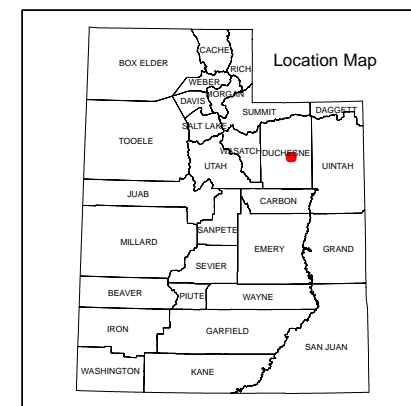
Township: T03.0S Range: R04.0W Section: 04 Meridian: U

Operator: EP ENERGY E&P COMPANY, L.P.

Map Prepared: 11/20/2013
Map Produced by Diana Mason

Wells Query		Units	
Status		STATUS	
APD - Approved Permit		ACTIVE	
DRL - Spudded (Drilling Commenced)		EXPLORATORY	
GIW - Gas Injection		GAS STORAGE	
GS - Gas Storage		NF PP OIL	
LOC - New Location		NF SECONDARY	
OPS - Operation Suspended		PI OIL	
PA - Plugged Abandoned		PP GAS	
PGW - Producing Gas Well		PP GEOTHERML	
PQW - Producing Oil Well		PP OIL	
SGW - Shut-in Gas Well		SECONDARY	
SOW - Shut-in Oil Well		TERMINATED	
TA - Temp. Abandoned			
TW - Test Well			
WOW - Water Disposal			
WW - Water Injection Well			
WSW - Water Supply Well			

Fields	
STATUS	
Unknown	
ABANDONED	
ACTIVE	
COMBINED	
INACTIVE	
STORAGE	
TERMINATED	



Well Name	EP ENERGY E&P COMPANY, L.P. Thomas 3-4C4 43013526660000			
String	Cond	Surf	I1	L1
Casing Size(in)	13.375	9.625	7.000	5.000
Setting Depth (TVD)	600	2300	9550	12700
Previous Shoe Setting Depth (TVD)	0	600	2300	9550
Max Mud Weight (ppg)	8.8	9.4	10.5	13.5
BOPE Proposed (psi)	1000	1000	5000	10000
Casing Internal Yield (psi)	2730	5750	11220	13940
Operators Max Anticipated Pressure (psi)	8915			13.5

Calculations	Cond String	13.375	"
Max BHP (psi)	.052*Setting Depth*MW=	275	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	203	YES 4.5 x 20 rotating head on structural pipe
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	143	YES OK
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	143	NO OK
Required Casing/BOPE Test Pressure=		600	psi
*Max Pressure Allowed @ Previous Casing Shoe=		0	psi *Assumes 1psi/ft frac gradient

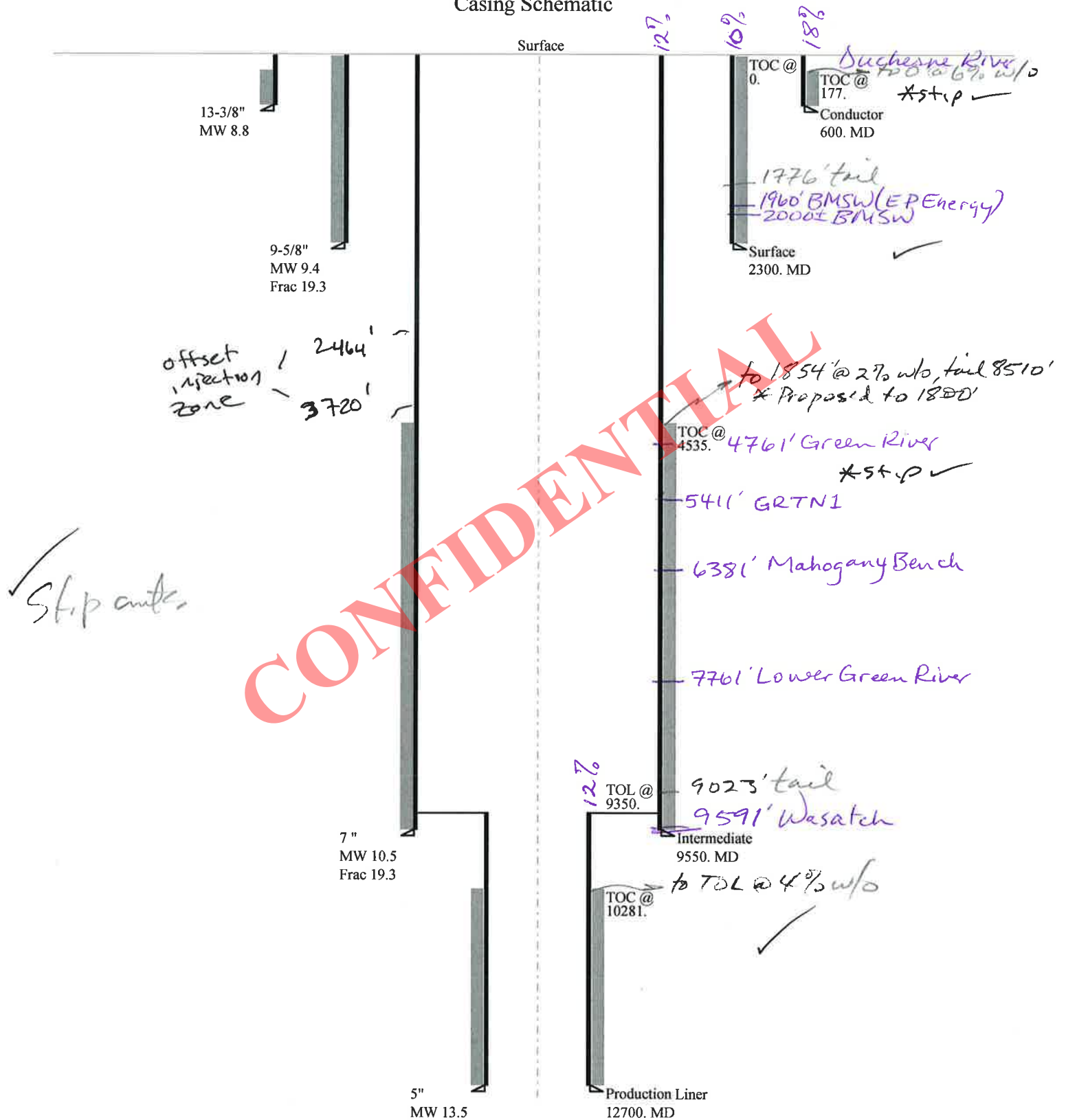
Calculations	Surf String	9.625	"
Max BHP (psi)	.052*Setting Depth*MW=	1124	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	848	YES 4.5 x 13 3/8 Smith rotating head
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	618	YES OK
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	750	NO OK
Required Casing/BOPE Test Pressure=		2300	psi
*Max Pressure Allowed @ Previous Casing Shoe=		600	psi *Assumes 1psi/ft frac gradient

Calculations	I1 String	7.000	"
Max BHP (psi)	.052*Setting Depth*MW=	5214	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	4068	YES 5M BOP stack, 5M kill lines, choke manifold
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	3113	YES OK
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	3619	NO OK
Required Casing/BOPE Test Pressure=		7854	psi
*Max Pressure Allowed @ Previous Casing Shoe=		2300	psi *Assumes 1psi/ft frac gradient

Calculations	L1 String	5.000	"
Max BHP (psi)	.052*Setting Depth*MW=	8915	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	7391	YES 10M BOPE w/rotating head, 5M annular,
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	6121	YES blind rams & mud cross
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	8222	YES OK
Required Casing/BOPE Test Pressure=		9758	psi
*Max Pressure Allowed @ Previous Casing Shoe=		9550	psi *Assumes 1psi/ft frac gradient

43013526660000 Thomas 3-4C4

Casing Schematic



Well name:	43013526660000 Thomas 3-4C4	
Operator:	EP ENERGY E&P COMPANY, LP.	
String type:	Conductor	Project ID: 43-013-52666
Location:	UINTAH COUNTY	

Design parameters:**Collapse**

Mud weight: 8.800 ppg
Design is based on evacuated pipe.

Minimum design factors:**Collapse:**

Design factor 1.125

Environment:

H2S considered? No
Surface temperature: 74 °F
Bottom hole temperature: 82 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 100 ft

Burst:

Design factor 1.00

Cement top: 177 ft

Burst

Max anticipated surface pressure: 202 psi
Internal gradient: 0.120 psi/ft
Calculated BHP 274 psi

Annular backup: 1.50 ppg

Tension:

8 Round STC: 1.80 (J)
8 Round LTC: 1.70 (J)
Buttress: 1.60 (J)
Premium: 1.50 (J)
Body yield: 1.50 (B)

Non-directional string.

Tension is based on buoyed weight.
Neutral point: 522 ft

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	600	13.375	54.50	J-55	ST&C	600	600	12.49	7444
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	274	1130	4.120	227	2730	12.00	28.4	514	18.07 J

Prepared Helen Sadik-Macdonald
by: Div of Oil, Gas & Mining

Phone: 801-538-5357
FAX: 801-359-3940

Date: December 23, 2013
Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 600 ft, a mud weight of 8.8 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Well name:	43013526660000 Thomas 3-4C4	
Operator:	EP ENERGY E&P COMPANY, LP.	
String type:	Surface	Project ID: 43-013-52666
Location:	UINTAH COUNTY	

Design parameters:**Collapse**

Mud weight: 9.400 ppg
Design is based on evacuated pipe.

Minimum design factors:**Collapse:**

Design factor 1.125

Burst:

Design factor 1.00

Environment:

H2S considered? No
Surface temperature: 74 °F
Bottom hole temperature: 106 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 100 ft

Cement top: Surface

Burst

Max anticipated surface pressure: 2,024 psi
Internal gradient: 0.120 psi/ft
Calculated BHP 2,300 psi

Annular backup: 1.50 ppg

Tension:

8 Round STC: 1.80 (J)
8 Round LTC: 1.70 (J)
Buttress: 1.60 (J)
Premium: 1.50 (J)
Body yield: 1.50 (B)

Tension is based on buoyed weight.
Neutral point: 1,978 ft

Non-directional string.**Re subsequent strings:**

Next setting depth: 9,550 ft
Next mud weight: 10.500 ppg
Next setting BHP: 5,209 psi
Fracture mud wt: 19.250 ppg
Fracture depth: 2,300 ft
Injection pressure: 2,300 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	2300	9.625	40.00	N-80	LT&C	2300	2300	8.75	29267
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	1123	3090	2.751	2121	5750	2.71	79.1	737	9.31 J

Prepared Helen Sadik-Macdonald
by: Div of Oil, Gas & Mining

Phone: 801 538-5357
FAX: 801-359-3940

Date: December 23, 2013
Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 2300 ft, a mud weight of 9.4 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Well name:	43013526660000 Thomas 3-4C4		
Operator:	EP ENERGY E&P COMPANY, LP.		
String type:	Intermediate	Project ID:	43-013-52666
Location:	UINTAH COUNTY		

Design parameters:**Collapse**

Mud weight: 10.500 ppg
Design is based on evacuated pipe.

Minimum design factors:**Collapse:**

Design factor 1.125

Burst:

Design factor 1.00

Environment:

H2S considered? No
Surface temperature: 74 °F
Bottom hole temperature: 208 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 1,000 ft

Cement top: 4,535 ft

Burst

Max anticipated surface pressure: 6,112 psi
Internal gradient: 0.220 psi/ft
Calculated BHP 8,213 psi

No backup mud specified.

Tension:

8 Round STC: 1.80 (J)
8 Round LTC: 1.80 (J)
Buttress: 1.60 (J)
Premium: 1.50 (J)
Body yield: 1.60 (B)

Tension is based on buoyed weight.
Neutral point: 8,032 ft

Non-directional string.**Re subsequent strings:**

Next setting depth: 12,700 ft
Next mud weight: 13.500 ppg
Next setting BHP: 8,906 psi
Fracture mud wt: 19.250 ppg
Fracture depth: 9,550 ft
Injection pressure: 9,550 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	9550	7	29.00	HCP-110	LT&C	9550	9550	6.059	107844
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	5209	9200	1.766	8213	11220	1.37	232.9	797	3.42 J

Prepared Helen Sadik-Macdonald
by: Div of Oil, Gas & Mining

Phone: 801-538-5357
FAX: 801-359-3940

Date: December 23, 2013
Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 9550 ft, a mud weight of 10.5 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Well name:	43013526660000 Thomas 3-4C4	
Operator:	EP ENERGY E&P COMPANY, LP.	
String type:	Production Liner	Project ID: 43-013-52666
Location:	UINTAH COUNTY	

Design parameters:**Collapse**

Mud weight: 13.500 ppg
Design is based on evacuated pipe.

Minimum design factors:**Collapse:**

Design factor 1.125

Burst:

Design factor 1.00

Environment:

H2S considered? No
Surface temperature: 74 °F
Bottom hole temperature: 252 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 1,000 ft

Cement top: 10,281 ft

Burst

Max anticipated surface pressure: 6,112 psi
Internal gradient: 0.220 psi/ft
Calculated BHP 8,906 psi

No backup mud specified.

Tension:

8 Round STC: 1.80 (J)
8 Round LTC: 1.80 (J)
Buttress: 1.60 (J)
Premium: 1.50 (J)
Body yield: 1.60 (B)

Tension is based on buoyed weight.
Neutral point: 12,022 ft

Liner top: 9,350 ft

Non-directional string.

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	3300	5	18.00	HCP-110	ST-L	12700	12700	4.151	261360
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	8906	15360	1.725	8906	13940	1.57	47.2	341	7.23 J

Prepared Helen Sadik-Macdonald
by: Div of Oil, Gas & Mining

Phone: 801 538-5357
FAX: 801-359-3940

Date: December 23, 2013
Salt Lake City, Utah

Remarks:

For this liner string, the top is rounded to the nearest 100 ft. Collapse is based on a vertical depth of 12700 ft, a mud weight of 13.5 ppg. The Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

ON-SITE PREDRILL EVALUATION**Utah Division of Oil, Gas and Mining**

Operator EP ENERGY E&P COMPANY, L.P.
Well Name Thomas 3-4C4
API Number 43013526660000 **APD No** 9047 **Field/Unit** ALTAMONT
Location: SWSW **Sec** 4 **Tw** 3.0S **Rng** 4.0W 1200 FSL 1000 FWL
1/4, 1/4
GPS Coord
(UTM) **Surface Owner** Blaine K Thomas, Marianne Thomas
Moore, Mark K. Thomas, etc

Participants

Jarred Thacker (EP Energy); Dennis Ingram (DOGM)

Regional/Local Setting & Topography

The Thomas 3-4C4 is located in northeastern Utah approximately 5.98 miles north of Duchesne along Highway 87, then east for another 2.26 miles where the access road will be constructed. Regionally, this well plots up along the northern reaches of Blue Bench which is mostly flat, bench-like habitat that slopes gently to the south into the Duchesne River Drainage. The topography rises to the north into rocky shelf-like habitat that is commonly found on Black tail Mountain or the southern slopes of the Book Cliffs, then into more bench property that has scattered pinion juniper trees. Approximately five miles to the west, the topography drops off Blue Bench into the Duchesne River corridor that drains south from the Uinta Mountains. The topography at the proposed location slopes to the south, southwest showing eleven to thirteen feet of fill will be required to match the six to eight foot cut along the north or high side.

Surface Use Plan**Current Surface Use**

Deer Winter Range
Recreational

New Road
Miles

0.08

Well Pad

Width 407 **Length** 465

Src Const Material

Onsite

Surface Formation

UNTA

Ancillary Facilities N

Waste Management Plan Adequate? Y

Environmental Parameters

Affected Floodplains and/or Wetlands N

Flora / Fauna

Dense sagebrush cover, rabbit brush, bunch grass, prickly pear cactus

Potential mule deer winter range, coyote, rabbit, bobcat, smaller mammals, song birds native to region, could have hawk or eagle activity but roost or nesting several miles to north or northwest.

Soil Type and Characteristics

Reddish fine-grained blow sand with underlying cobble rocks

Erosion Issues N**Sedimentation Issues** N**Site Stability Issues** N**Drainage Diversion Required?** N**Berm Required?** Y**Erosion Sedimentation Control Required?** N**Paleo Survey Run?** N **Paleo Potential Observed?** N **Cultural Survey Run?** N **Cultural Resources?** N**Reserve Pit****Site-Specific Factors****Site Ranking**

Distance to Groundwater (feet)	>200	0
Distance to Surface Water (feet)	>1000	0
Dist. Nearest Municipal Well (ft)	>5280	0
Distance to Other Wells (feet)	>1320	0
Native Soil Type	High permeability	20
Fluid Type	Fresh Water	5
Drill Cuttings	Normal Rock	0
Annual Precipitation (inches)		0

Affected Populations**Presence Nearby Utility Conduits** Not Present 0**Final Score** 25 1 Sensitivity Level**Characteristics / Requirements**

Proposed reserve pit along the north side of location in cut, measuring 110' wide by 150' long by 12' deep

Closed Loop Mud Required? **Liner Required?** Y **Liner Thickness** 16 **Pit Underlayment Required?****Other Observations / Comments**

Blow sand and sagebrush, eight feet of cut on the high side and 13.1 feet of fill on the low side. The cut n fill sheet shows 7.6 feet of cut at the wellhead. Landowner did not attend, no issues or drainages noted during visit.

Dennis Ingram
Evaluator11/27/2013
Date / Time

Application for Permit to Drill

Statement of Basis

Utah Division of Oil, Gas and Mining

APD No	API WellNo	Status	Well Type	Surf Owner	CBM
9047	43013526660000	LOCKED	OW	P	No
Operator	EP ENERGY E&P COMPANY, L.P.			Surface Owner-APD	Blaine K Thomas, Marianne Thomas Moore, Mark K. Thomas, etc
Well Name	Thomas 3-4C4			Unit	
Field	ALTAMONT			Type of Work	DRILL
Location	SWSW 4 3S 4W U 1200 FSL 1000 FWL (UTM) 555490E 4455183N			GPS Coord	

Geologic Statement of Basis

E P proposes to set 600 feet of conductor and 2,300 feet of surface casing both of which will be cemented to surface. The surface and intermediate holes will be drilled utilizing fresh water mud. The estimated depth to the base of moderately saline ground water is 2,000 feet. A search of Division of Water Rights records indicates that there are 5 water wells within a 10,000 foot radius of the center of Section 4. Wells range between 150 and 500 feet in depth and are used for irrigation, stock watering, domestic and industrial purposes. These wells probably produce from the Duchesne River Formation. The Duchesne River Formation is made up of sandstones with interbedded shales and is the most prominent fresh water aquifer in the area. The proposed casing and cement program should adequately protect ground water in this area.

Brad Hill
APD Evaluator

12/9/2013
Date / Time

Surface Statement of Basis

This location has been staked to run in a northwest, southeast direction, having the reserve pit along the north, northeastern side in cut. Surface soils are reddish in color and fine-grained sand at the surface with underlying cobble rock. There wasn't any drainages effected by the proposed wellsite or surface waters. The reserve pit shall be in cut along the northern, northeast side of the location and lined with a 16 mil or thicker synthetic liner to prevent seepage. This pit should be fenced to keep wildlife from entering. Erosion or sediment should not be a big issue, but if the slopes on the fill side along the southern portion of this pad washes out the operator shall take steps to stabilize by seeding the slope.

A presite evaluation was done on November 27, 2013 to take input and address issues regarding the construction and drilling of the Thomas 3-4C4. Blaine Thomas was shown as the landowner of record and was therefore invited to the presite meeting. EP Energy and the landowner have entered into a surface damage agreement.

Dennis Ingram
Onsite Evaluator

11/27/2013
Date / Time

Conditions of Approval / Application for Permit to Drill

Category	Condition
----------	-----------

Pits	A synthetic liner with a minimum thickness of 16 mils shall be properly installed and maintained in the reserve pit.
Pits	The reserve pit should be located on the north, northeast side of the location.
Surface	The well site shall be bermed to prevent fluids from leaving the pad.
Surface	The reserve pit shall be fenced upon completion of drilling operations.

CONFIDENTIAL

WORKSHEET APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 11/13/2013

API NO. ASSIGNED: 43013526660000

WELL NAME: Thomas 3-4C4

OPERATOR: EP ENERGY E&P COMPANY, L.P. (N3850)

PHONE NUMBER: 713 997-5038

CONTACT: Maria S. Gomez

PROPOSED LOCATION: SWSW 04 030S 040W

Permit Tech Review: ☒

SURFACE: 1200 FSL 1000 FWL

Engineering Review: ☒

BOTTOM: 1200 FSL 1000 FWL

Geology Review: ☒

COUNTY: DUCHESNE

LATITUDE: 40.24526

LONGITUDE: -110.34759

UTM SURF EASTINGS: 555490.00

NORTHINGS: 4455183.00

FIELD NAME: ALTAMONT

LEASE TYPE: 4 - Fee

LEASE NUMBER: Fee

PROPOSED PRODUCING FORMATION(S): GREEN RIVER(LWR)-WASATCH

SURFACE OWNER: 4 - Fee

COALBED METHANE: NO

RECEIVED AND/OR REVIEWED:

☒ PLAT☒ Bond: STATE/FEE - 400JU0708☐ Potash☐ Oil Shale 190-5☐ Oil Shale 190-3☐ Oil Shale 190-13☒ Water Permit: Duchesne City☐ RDCC Review:☒ Fee Surface Agreement☐ Intent to Commingle

Commingle Approved

LOCATION AND SITING:

☐ R649-2-3.

Unit:

☐ R649-3-2. General☐ R649-3-3. Exception☒ Drilling Unit

Board Cause No: Cause 139-90

Effective Date: 5/9/2012

Siting: 4 Wells Per 640 Acre

☐ R649-3-11. Directional Drill

Comments: Presite Completed

Stipulations: 5 - Statement of Basis - bhill
8 - Cement to Surface -- 2 strings - hmadonald
12 - Cement Volume (3) - hmadonald

RECEIVED: January 13, 2014



GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

Permit To Drill

Well Name: Thomas 3-4C4

API Well Number: 43013526660000

Lease Number: Fee

Surface Owner: FEE (PRIVATE)

Approval Date: 1/13/2014

Issued to:

EP ENERGY E&P COMPANY, L.P., 1001 Louisiana, Houston, TX 77002

Authority:

Pursuant to Utah Code Ann. 40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of Cause 139-90. The expected producing formation or pool is the GREEN RIVER(LWR)-WASATCH Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

Duration:

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

General:

Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

Conditions of Approval:

Compliance with the Conditions of Approval/Application for Permit to Drill outlined in the Statement of Basis (copy attached).

Cement volumes for the 13 3/8" and 9 5/8" casing strings shall be determined from actual hole diameters in order to place cement from the pipe setting depths back to the surface.

Cement volume for the 7" intermediate string shall be determined from actual hole diameter in order to place cement from the pipe setting depth back to 1800' MD as indicated in the submitted drilling plan.

Additional Approvals:

The operator is required to obtain approval from the Division of Oil, Gas and mining before performing any of the following actions during the drilling of this well:

- Any changes to the approved drilling plan - contact Dustin Doucet
- Significant plug back of the well - contact Dustin Doucet
- Plug and abandonment of the well - contact Dustin Doucet

Notification Requirements:

The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

- Within 24 hours following the spudding of the well - contact Carol Daniels
OR
submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website
at <http://oilgas.ogm.utah.gov>
- 24 hours prior to testing blowout prevention equipment - contact Dan Jarvis
- 24 hours prior to cementing or testing casing - contact Dan Jarvis
- Within 24 hours of making any emergency changes to the approved drilling program
- contact Dustin Doucet
- 24 hours prior to commencing operations to plug and abandon the well - contact Dan Jarvis

Contact Information:

The following are Division of Oil, Gas and Mining contacts and their telephone numbers (please leave a voicemail message if the person is not available to take the call):

- Carol Daniels 801-538-5284 - office
- Dustin Doucet 801-538-5281 - office
801-733-0983 - after office hours
- Dan Jarvis 801-538-5338 - office
801-231-8956 - after office hours

Reporting Requirements:

All reports, forms and submittals as required by the Utah Oil and Gas Conservation General Rules will be promptly filed with the Division of Oil, Gas and Mining, including but not limited to:

- Entity Action Form (Form 6) - due within 5 days of spudding the well
- Monthly Status Report (Form 9) - due by 5th day of the following calendar month
- Requests to Change Plans (Form 9) - due prior to implementation
- Written Notice of Emergency Changes (Form 9) - due within 5 days
- Notice of Operations Suspension or Resumption (Form 9) - due prior to implementation
- Report of Water Encountered (Form 7) - due within 30 days after completion
- Well Completion Report (Form 8) - due within 30 days after completion or plugging

Approved By:

Approved By:

A handwritten signature in black ink, appearing to read "J. Rogers", written over a horizontal line.

For John Rogers
Associate Director, Oil & Gas

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		5. LEASE DESIGNATION AND SERIAL NUMBER: Fee
		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
1. TYPE OF WELL Oil Well		7. UNIT or CA AGREEMENT NAME:
2. NAME OF OPERATOR: EP ENERGY E&P COMPANY, L.P.		8. WELL NAME and NUMBER: Thomas 3-4C4
3. ADDRESS OF OPERATOR: 1001 Louisiana, Houston, TX, 77002		9. API NUMBER: 43013526660000
PHONE NUMBER: 713 997-5038 Ext		9. FIELD and POOL or WILDCAT: ALTAMONT
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1200 FSL 1000 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWSW Section: 04 Township: 03.0S Range: 04.0W Meridian: U		COUNTY: DUCHESNE
		STATE: UTAH

11.

CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT Approximate date work will start: 1/13/2015	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input checked="" type="checkbox"/> APD EXTENSION OTHER: <input type="text"/>
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:			
<input type="checkbox"/> SPUD REPORT Date of Spud:			
<input type="checkbox"/> DRILLING REPORT Report Date:			

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

EP would like to extend APD for one year. Thanks,

Approved by the
January 15, 2015
Oil, Gas and Mining

Date: _____

By: 

NAME (PLEASE PRINT)

Maria S. Gomez

PHONE NUMBER

713 997-5038

TITLE

Principal Regulatory Analyst

SIGNATURE

N/A

DATE

1/15/2015



The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

Request for Permit Extension Validation Well Number 43013526660000

API: 43013526660000

Well Name: Thomas 3-4C4

Location: 1200 FSL 1000 FWL QTR SWSW SEC 04 TWNP 030S RNG 040W MER U

Company Permit Issued to: EP ENERGY E&P COMPANY, L.P.

Date Original Permit Issued: 1/13/2014

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. Following is a checklist of some items related to the application, which should be verified.

- If located on private land, has the ownership changed, if so, has the surface agreement been updated? ☐ Yes ☒ No
- Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location? ☐ Yes ☒ No
- Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well? ☐ Yes ☒ No
- Have there been any changes to the access route including ownership, or rightof- way, which could affect the proposed location? ☐ Yes ☒ No
- Has the approved source of water for drilling changed? ☐ Yes ☒ No
- Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation? ☐ Yes ☒ No
- Is bonding still in place, which covers this proposed well? ☒ Yes ☐ No

Signature: Maria S. Gomez

Date: 1/15/2015

Title: Principal Regulatory Analyst Representing: EP ENERGY E&P COMPANY, L.P.

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		5. LEASE DESIGNATION AND SERIAL NUMBER: Fee
		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
		7. UNIT or CA AGREEMENT NAME:
1. TYPE OF WELL Oil Well	8. WELL NAME and NUMBER: Thomas 3-4C4	
2. NAME OF OPERATOR: EP ENERGY E&P COMPANY, L.P.	9. API NUMBER: 43013526660000	
3. ADDRESS OF OPERATOR: 1001 Louisiana, Houston, TX, 77002	PHONE NUMBER: 713 997-5038 Ext	9. FIELD and POOL or WILDCAT: ALTAMONT
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1200 FSL 1000 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWSW Section: 04 Township: 03.0S Range: 04.0W Meridian: U		COUNTY: DUCHESNE
		STATE: UTAH

11.

CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT Approximate date work will start: 2/17/2015	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input checked="" type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK
<input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input type="text"/>

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Drilling changes to APD. Changed depths, spudder rig, cement, MW's, etc. Please see attached for details.

Approved by the
Utah Division of
Oil, Gas and Mining

Date: February 19, 2015

By: 

Please Review Attached Conditions of Approval

NAME (PLEASE PRINT) Maria S. Gomez	PHONE NUMBER 713 997-5038	TITLE Principal Regulatory Analyst
SIGNATURE N/A		DATE 2/17/2015



The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

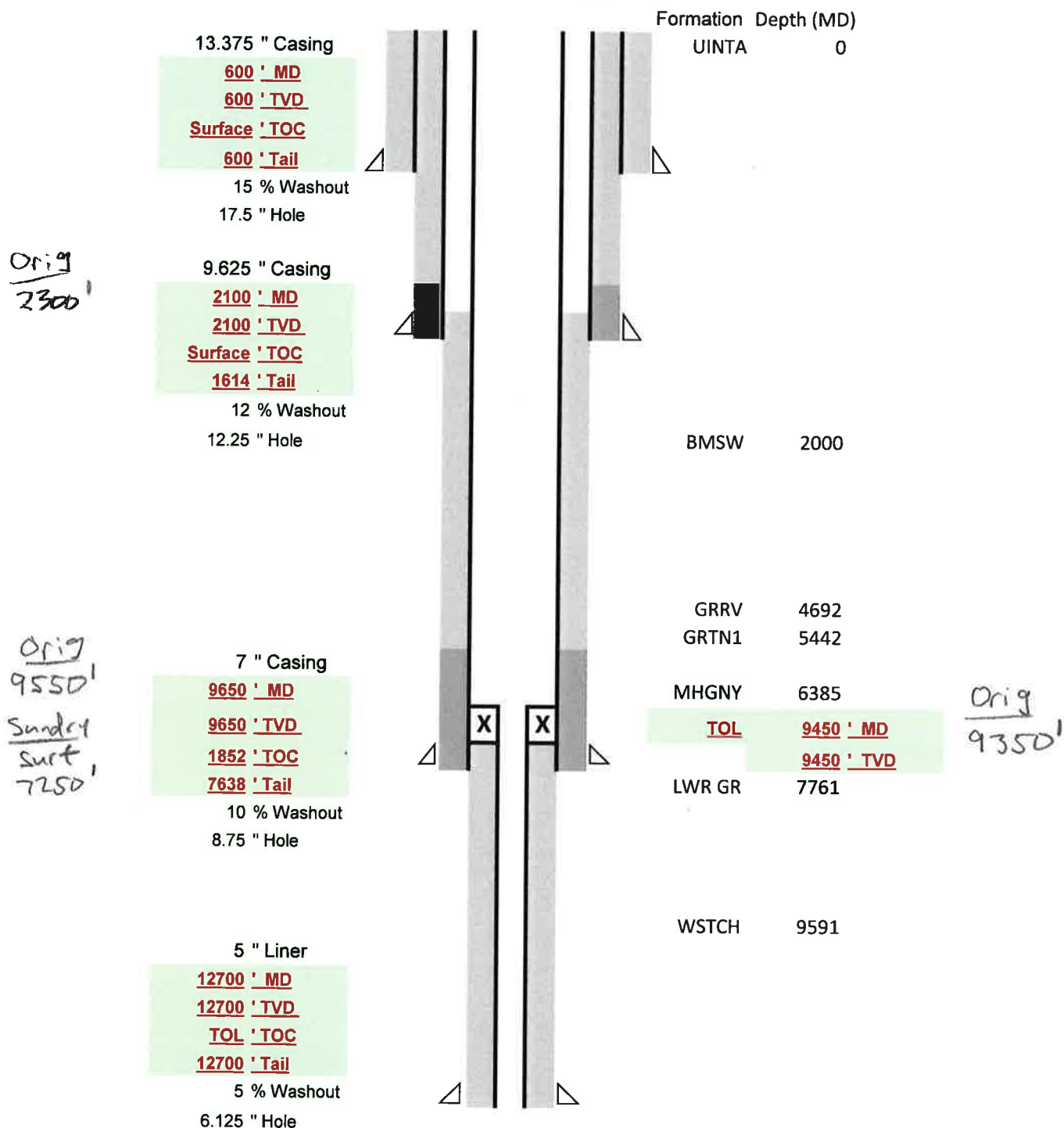
Electronic Permitting System - Sundry Notices

Sundry Conditions of Approval Well Number 43013526660000

A properly maintained and lubricated rotating head should be used while drilling with air.

EP ENERGY E&P COMPANY, L.P.

Thomas 3-4C4
43013526660000



injection wells.
see sundry

EP ENERGY E&P COMPANY, L.P.
Thomas 3-4C4
43013526660000

1.125											
1											
1.8											
187	1130	259	4.37	2730	575	4.74	514	15.72	524	32.7	28.7
13.375 " Casing											
8.3	0.12	0.0	0.0	575	55	J-55	STC	758	1.15	0	0.00
9.625 " Casing											
443	3090	905	3.41	5750	2100	2.74	737	8.77	1833	84.0	73.6
7 " Casing											
8.3	0.22	0.0	0.0	3553	40.0	N-80	LTC	358	2.36	195	1.30
5 " Liner											
5651	9200	5214	1.76	11220	7774	1.44	797	3.38	8115	279.9	235.8
5 " Liner											
10.4	0.22	0.0	0.0	7774	29.0	HCP-110	LTC	721.0	1.9	292.0	1.6
5 " Liner											
5651	15360	8445	1.82	13940	8445	1.65	341	7.24	12064	58.5	47.1
5 " Liner											
12.8	0.22	0.0	0.0	9450	18.0	HCP-110	ST-L	193.0	1.5	0.0	0.0

**Thomas 3-4C4
Sec. 4, T3S, R4W
DUCHESE COUNTY, UT**

EP ENERGY E&P COMPANY, L.P.

DRILLING PROGRAM

1. Estimated Tops of Important Geologic Markers

<u>Formation</u>	<u>Depth</u>
Green River (GRRV)	4,692' TVD
Green River (GRTN1)	5,442' TVD
Mahogany Bench	6,385' TVD
L. Green River	7,761' TVD
Wasatch	9,591' TVD
T.D. (Permit)	12,700' TVD

2. Estimated Depths of Anticipated Water, Oil, Gas or Mineral Formations:

<u>Substance</u>	<u>Formation</u>	<u>Depth</u>
	Green River (GRRV)	4,692' MD / TVD
	Green River (GRTN1)	5,442' MD / TVD
	Mahogany Bench	6,385' MD / TVD
Oil	L. Green River	7,761' MD / TVD
Oil	Wasatch	9,591' MD / TVD

3. Pressure Control Equipment: (Schematic Attached)

A Diverter System on structural pipe from surface to 600' MD/TVD. A Diverter System from 600' MD/TVD to 2,100' MD/TVD on Conductor. A 10M BOP stack w/ rotating head, spacer spool, 5M annular, flex rams, blind rams & single w/ flex rams used from 2,100' MD/TVD to 9,650' MD/TVD. A 10M BOP stack w/ rotating head, spacer spool, 5M annular, flex rams, blind rams & single w/ flex rams from 9,650' MD/TVD to TD (12,700' MD /TVD).

The BOPE and related equipment will meet the requirements of the 5M and 10M system.

We have pre-set numerous wells around the proposed location and had no issues.

There are 7 water wells within 10,000' of the proposed location but none of them are within 1 mile.

There are 5 SWD wells within 3 miles of the proposed location but none of them are within 1.0 mile. No pressure communication is expected to be seen, however it is important to be aware of them. **If any pressure communication is seen, we can weight up to control the wellbore. Our intermediate cement design will be 12.5 ppg lead & 13 ppg tail. We will also pump at least a 11.0 ppg weight spacer. We will also bring the cement up to surface instead of 500' into the shoe.**

1. **The Belcher 2-33B4 SWD is 7,013' or 1.33 miles North of the proposed location.** It is owned by EP Energy & it is a pretty new SWD well (it was converted to a SWD well in 9/2014). The injection interval is from 4,142'-6,230'. It has been injecting at an average of 4,200 bbls/day @ 626 psi. The shut in pressure is 283 psi. The EMW is 9.91 ppg. Since this SWD is North of the proposed location (which means it is not on fracture orientation) & more than 1 mile away, I know we will not see any pressure from this well.
2. **The Lindsay Russell 2-32B4 SWD well is 7,793' or 1.48 miles North West of the proposed location.** The injection interval is @ 2464'-3726'. It has been injecting between 1600-2000 bbls/day @ 900 psi. We own this well & it is an active SWD well. When it goes down on maintenance or goes down, the pressure dissipates to 20 psi and stays at 20 psi. Using 20 psi, the EMW @ 2464' is 8.76 ppg. Since this SWD is North West of the proposed location (which means it is not on fracture orientation) & more than 1 mile away, I know we will not see any pressure from this well.
3. **The IWM 3-30B4 SWD well is 11,977' or 2.27 miles North West of the proposed location.** The injection interval is @ 4063'-5130'. It has been injecting ~5,000 bbls/day @ 720 psi. IWM owns this well & it is an active SWD well. The shut in pressure is 321 psi. Using 321 psi, the EMW @ 4063' is 10.12 ppg. Since this SWD is North West of the proposed location (which means it is not on fracture orientation) & more than 2.0 miles away, I know we will not see any pressure from this well.
4. **The Blue Bench 1-13C5 SWD is 14,469' or 2.74 miles to the South West of the proposed location.** It is owned by Intercept Energy & is an active SWD well. It is injecting into the Upper/Middle Green River & Upper-most Lower Green River. The injection interval is from 4106'-7528'. The injection rate is now ~500 bbls/day @ 500-600 psi (I just got off the phone with Keith who is with Intercept Energy). The pressure dissipates to 300 psi while down on maintenance. Using 300 psi, the EMW @ 4106' is 10.01 ppg. We will not see any pressure from this well since it is over 2.5 miles away from the proposed location. We have drilled as close as 0.98 miles to this SWD well (that well is between the SWD & this proposed location) & on fracture orientation and have not seen any pressure while drilling.

5. **The Rhoades Moon 1-36B5 SWD is 15,139' or 2.87 miles North West of the proposed location.** It is owned by EP Energy & is an active SWD well. It has been injecting since 2001. The injection interval is from 4114'-5055'. The injection rate averages 7200 bbls/day @ 900 psi (maximum allowable injection pressure is 1400 psi). When the well goes down for maintenance, the pressure dissipates to 600 psi. Using 600 psi, the EMW @ 4114' is 11.4 ppg (the weight of the fluid being injected is ~8.6 ppg). Since this SWD is North West of the proposed location (which means it is not on fracture orientation) & more than 2.5 miles away, I do not think we will see any pressure from this well.

OPERATORS MINIMUM SPECIFICATIONS FOR BOPE:

The surface casing will be equipped with a flanged casing head of 5M psi working pressure. An 11" 5M x 11" 10M spool, 11" x 10M psi BOP and 5M psi annular will be nipped up on the surface casing and tested to 250 psi low test / 3,000 psi high test for 10 minutes each prior to drilling out. The surface casing will be tested to 1,000 psi. for 30 mins. Intermediate casing will be tested to the greater of 1,500 psi or 0.22 psi/ft. The choke manifold equipment, upper Kelly cock and floor safety valves will be tested to 5M psi. The annular preventer will be tested to 250 psi low test / 4,000 psi high test. The 10M BOP will be installed with rotating head, spacer spool, 5M annular, flex rams, blind rams & single w/ flex rams from surface shoe to TD. The BOPE will be hydraulically operated.

In addition, the BOP equipment will be tested after running intermediate casing, after any repairs to the equipment and at least once every 30 days. Pipe and blind rams will be activated on each trip, annular preventer will be activated weekly and weekly BOP drills will be held with each crew.

Statement on Accumulator System and Location of Hydraulic Controls:

Precision 406 is expected to be used to drill the proposed well. Operations will commence after approval of this application. Manual and/or hydraulic controls will be in compliance with 5M and 10M psi systems.

Auxiliary Equipment:

- A) Pason Gas Monitoring 2,100' - TD
- B) Mud logger with gas monitor – 2,100' to TD (12,700' MD/TVD)
- C) Choke manifold with one manual and one hydraulic operated choke
- D) Full opening floor valve with drill pipe thread
- E) Upper and lower Kelly cock
- F) Shaker, de-sander and centrifuge

4. Proposed Casing & Cementing Program:

Please refer to the attached Wellbore Diagram.

All casing will meet or exceed the following design safety factors:

- Burst = 1.00
- Collapse = 1.125
- Tension = 1.2 (including 100k# overpull)

Cement design calculations for intermediate and production hole will be based on minimum 10% excess over gauge hole volumes. Actual volumes pumped will be a minimum of 10% excess over caliper volume to designed tops of cement for any section logged. A minimum of 50% excess over gauge volume will be pumped on surface casing.

5. **Drilling Fluids Program:**

Proposed Mud Program:

Interval	Type	Mud Weight
Surface	Air	Air
Intermediate	WBM	9.3 – 10.4
Production	WBM	11.0 – 12.8

Anticipated mud weights are based on actual offset well bottom-hole pressure data. Mud weights utilized may be somewhat higher to allow for trip margin and to provide hole stability for running logs and casing.

Visual mud monitoring equipment will be utilized.

6. **Evaluation Program:**

Logs:

Mud Log: 2,100' MD/TVD – TD (12,700' MD/TVD)

Open Hole Logs: Gamma Ray, Neutron-Density, Resistivity, Sonic, from surface casing shoe to TD.

7. **Abnormal Conditions:**

Maximum anticipated bottomhole pressure calculated at 12,700' TVD equals approximately 8,453 psi. This is calculated based on a 0.6656 psi/ft gradient (12.8 ppg mud density at TD).

Maximum anticipated surface pressure equals approximately 5,659 psi (bottomhole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/ft).

Maximum anticipated surface pressure based on frac gradient at 7" casing shoe is 0.8 psi/ft at 9,650' TVD = 7,720 psi

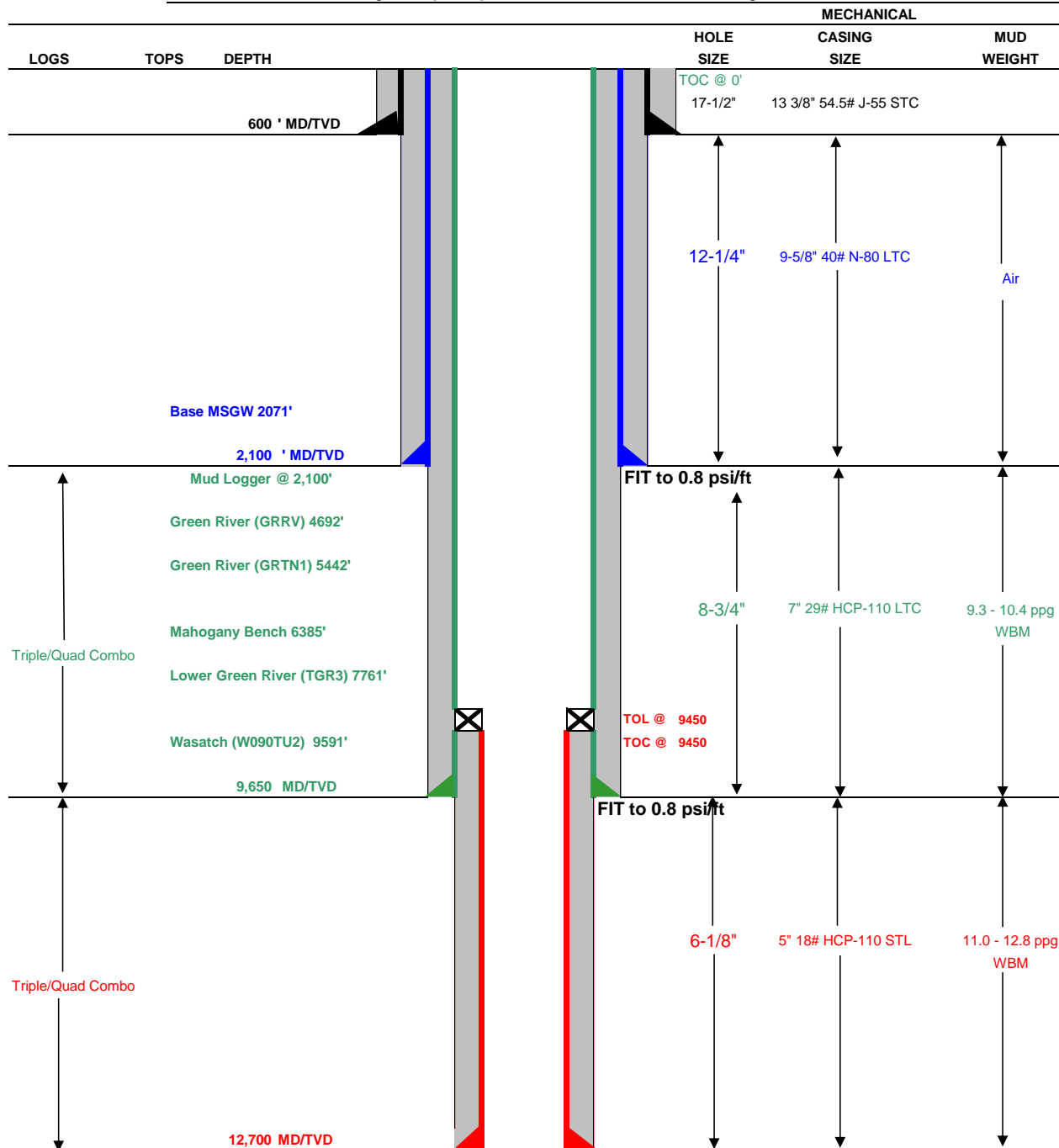
BOPE and casing design will be based on the lesser of the two MASPs which is 5,659 psi.

8. **OPERATOR REQUESTS THAT THE PROPOSED WELL BE PLACED ON CONFIDENTIAL STATUS.**



Drilling Schematic

Company Name: EP ENERGY	Date: February 16, 2015
Well Name: Thomas 3-4C4	TD: 12,700
Field, County, State: Altamont, Duchesne, Utah	AFE #: TBD
Surface Location: Sec 4 T3S R4W 1200' FSL 1000' FWL	BHL: Straight Hole
Objective Zone(s): Green River, Wasatch	Elevation: 6044.4
Rig: Precision 406	Spud (est.): TBD
BOPE Info: Diverter System from 600' to 2,100' . 11 10M BOPE w/ rotating head & 5M annular from 2,100' to 9,650' . 11 10M BOPE w/ rotating head, spacer spool, 5M annular, flex rams, blind rams, single w/ flex rams from 9,650' to TD	



DRILLING PROGRAM

CASING PROGRAM	SIZE	INTERVAL		WT.	GR.	CPLG.	BURST	COLLAPSE	TENSION
CONDUCTOR	13 3/8"	0	600	54.5	J-55	STC	2,740	1,130	514
SURFACE	9-5/8"	0	2100	40.00	N-80	LTC	5,750	3,090	737
INTERMEDIATE	7"	0	9650	29.00	HCP-110	LTC	11,220	9,750	797
PRODUCTION LINER	5"	9450	12700	18.00	HCP-110	STL	13,940	15,450	341

CEMENT PROGRAM		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
CONDUCTOR		600	Class G + 3% CACL2	758	100%	15.8 ppg	1.15
SURFACE	Lead	1,600	EXTENDACEM SYSTEM: Type V Cement + 2% Cal-Seal + 0.35% Versaset + 0.3% D-Air 5000 + 6% Salt + 2% Econolite + 0.125 Poly-E-Flake	358	100%	12.0 ppg	2.36
	Tail	500	HALCEM SYSTEM: Class G Cement + 3 lbm/sk Silicalite Compacted + 1% Salt + 0.3% Econolite + 0.25 lbm/sk Poly-E-Flake + 0.25 lbm/sk Kwik Seal + 0.3% D-AIR 5000	195	50%	14.3 ppg	1.30
INTERMEDIATE	Lead	7,250	EXTENDACEM SYSTEM: Class G Cement + 6% Bentonite + 0.2% Econolite + 0.3% Versaset + 0.75% HR-5 + 0.3% Super CBL + 0.2% Halad-322 + 0.125 lb/sk Poly-E-Flake	721	35%	12.5 ppg	1.91
	Tail	2,400	EXPANDACEM SYSTEM: Class G Cement + 4% Bentonite + 0.25 Poly-E-Flake + 0.1% Halad-413 + 5 lb/sk Silicalite Compacted + 0.15% SA-1015 + 0.3% HR-5	292	30%	13.0 ppg	1.64
PRODUCTION LINER		3,250	EXTENDACEM SYSTEM: Class G Cement + 0.2% Super CBL + 0.3% Halad 344 + 0.3% Halad 413 + 5 lb/sk Silicalite + 20% SSA-1 + 2% Bentonite + 0.7% HR-5	193	30%	14.2 ppg	1.52

FLOAT EQUIPMENT & CENTRALIZERS	
CONDUCTOR	PDC drillable guide shoe, 1 joint, PDC drillable float collar. Thread lock all float equipment. Install bow spring centralizers on the bottom 3 joints of casing.
SURFACE	PDC drillable guide shoe, 1 joint casing, PDC drillable float collar. Thread lock all float equipment. Install bow spring centralizers on the bottom 3 joints of casing & every 3rd joint thereafter.
INTERMEDIATE	Halliburton's PDC drillable 10M,P-110 float shoe, 1 joint, PDC drillable 10M, P-110 float collar. Thread lock all float equipment. Maker joint at +/- 7,750'.
LINER	Float shoe, 1 joint, float collar, 1 joint, landing collar. Thread lock all FE. Maker joints every 1000'.

PROJECT ENGINEER(S): Brad MacAfee 713-997-6383

MANAGER: Bob Dodd



GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

March 17, 2016

EP Energy E&P Company, L.P.
1001 Louisiana
Houston, TX 77002

Re: APD Rescinded – Thomas 3-4C4, Sec. 4, T. 3S, R. 4W
Duchesne County, Utah API No. 43-013-52666


Ladies and Gentlemen:

The Application for Permit to Drill (APD) for the subject well was approved by the Division of Oil, Gas and Mining (Division) on January 13, 2014. On January 15, 2015 the Division granted a one-year APD extension. No drilling activity at this location has been reported to the division. Therefore, approval to drill the well is hereby rescinded, effective March 17, 2016.

A new APD must be filed with this office for approval prior to the commencement of any future work on the subject location.

If any previously unreported operations have been performed on this well location, it is imperative that you notify the Division immediately.

Sincerely,


Diana Mason
Environmental Scientist

cc: Well File
Brad Hill, Technical Service Manager